A TEACHER'S MANUAL AND RESOURCE BOOK
for use with THE WORLD AROUND US
by Zoe A. Thralls

METHODS AND MATERIALS FOR TEACHING GEOGRAPHY

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CURRICULUM

EXPERIMENTAL EDITION
Includes Answer Key for
Teaching Tests for use with
The World Around Us

HARCOURT, BRACE AND COMPANY
NEW YORK · CHICAGO

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FOR TEACHING GEOGRAPHY

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Manual

by

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Harcourt, Brace and Company
New York • Chicago

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OF ALBERTA

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(c . 2 . 59)

Printed in the United States of America

A NOTE TO THE TEACHER

This experimental edition of "Methods and Materials for Teaching Geography" has been prepared as a special service to teachers who are using The World Around Us in their classrooms. The purpose of this edition is to provide suggestions and resource materials both for the teacher who is presenting geography for the first time and for the teacher who has longer experience. We hope that you will find in this manual suggestions and resources that will be effective in your particular classroom.

From this experimental edition we hope to learn what kinds of material teachers find most helpful in a teacher's manual and resource book. There are, of course, many more suggestions than can be used in a given classroom. We invite you, therefore, to write to us and tell us which kinds of material you have found most valuable.

Please address your letter to the School Text Research Division, Harcourt, Brace and Company, 750 Third Avenue, New York 17, New York.

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AS YOU MEET YOUR CLASS EACH DAY

"Crisis in Indo-China," "Tension in Pakistan," "American Patrol Plane Down Off China" -- headlines like these hammer at us every few days in this mid-twentieth century. Everywhere we feel the unremitting pressure of the Communist world against the free world. Constantly we hear of Asians, Africans, and others striving for their fair share of the world's bounty and demanding their rights to life, liberty, and the pursuit of happiness.

Headlines and facts like these are as much a part of American life in our day as are the cost of living and the tax rate. To Americans has come a new responsibility to help lead the world's peoples away from tense international relations and into an era free from the specter of the cloud shaped like a mushroom.

What Americans do about the responsibility and challenge of world leadership depends mainly upon how well they understand the peoples of the world, their problems, aspirations, and ways of living. This is where you enter the picture. As a teacher of world geography yours is a job of overriding importance. For on you has fallen the responsibility of bringing teen-agers far along the road toward this basic understanding of people.

With this deep realization of the importance of your work, you prepare each day to meet your class of twenty-five or forty or even more teen-agers. You know that you must hold these young people together, day after day, as a group of human beings who need to learn more, much more, about the complex world of the 20th century into which they were born. But you also know that you must meet these students as individuals, each with different abilities, different interests, and different needs.

And every student a dynamo of exuberant, animal energy!

You may well be asking yourself: How can I manage to channel this energy day after day for several months so that it will move along the paths we need to follow?

How can I get these students to share with me my own continuing desire to know more about the people and places of the world?

How can I help them to open their minds to appreciations and attitudes that characterize the sensitive citizen of today's world?

How can I help them to realize that the future of the world, for good or ill, may well depend upon their knowledge and understanding of the peoples of the world?

These great questions are challenging indeed. Nor are they the only important questions in your mind as you prepare to meet your students.

How can I best get young people into a questioning frame of mind about the world and its peoples?

As they begin formulating their questions, how can I best help them to find interesting and meaningful answers with the materials and methods at hand -- textbook study, activities, supplementary reading, audio-visual aids, and so on?

How can I best help my students to improve their geography skills, especially the skills involved in reading text, maps, and pictures?

How can I best evaluate the progress of my students from time to time?

Whether you are an experienced teacher or a beginner, all of these questions and many more are important to you. But you need not be dismayed.In your school, your community, and -- most of all -- in your own experience, you have rich resources to draw upon as you deal with these questions.

WHAT KIND OF MANUAL IS THIS?

This manual of suggested Methods and Materials for Teaching Geography has been prepared to help you. The same questions that you are facing have animated the many people who have worked together for several years on the publication of The World Around Us and of this manual. All of us -- writers, editors, illustrators, and critics -- have had in mind a very real picture of you as you work each day with your students.

We have had a picture, too,of your students -- those energetic dynamos -- both as a group and as individuals with different abilities, interests, and needs. We have kept asking ourselves what you need, in textbook and manual, to help you motivate, stimulate, and guide these students.

Most of us have been in your shoes. Several of us are now teaching geography to junior high school students. Others of us have only recently left the classroom to carry out other educational tasks. In the corridors of our experience we have sought out answers to your questions and ours.

We have also tapped the day-by-day experience of teachers who have used the earlier edition of The World Around Us, published in 1948 and called The World: Its Lands and Peoples. From many of them we have had helpful suggestions.

All of this experience we have put into this manual. Not for the purpose of blueprinting your course for you! We have not tried to produce a "how-to-do-it" book. Teaching is not an imitative art; it is a creative art, an art of self-discovery. We have tried, rather, to compile ideas and suggestions that practicing teachers have found workable and rewarding. From these you may select, adapt, or reject as you see fit. As you draw upon these suggestions and add your own ideas, your geography course will become a valuable and stimulating experience for your teen-age students.

WHY DO WE TEACH WORLD GEOGRAPHY?

Before any of us get down to teaching young people anything, we have to get a firm grip on what we expect to do -- our desired outcomes, our expected changes in behavior, our aims and ends.

What do we expect to do in world geography? Let's explore this. Geography that has any validity for today's students is about people. The world around us is a world of people. It is a changing world, changing faster than we sometimes care to admit. It is a world in which places and commodities are less important than people and ideas.

The 2,620,000,000 people of the world -- and there are many more being born even as we write this -- are being drawn closer together with each decade of our history. Our interrelationship with all of these peoples and our interrelationship with the total natural environment of the world in which we live -- this is what geography is about.

It has been said many times, but cannot be said too often, that this is a shrinking world, made smaller by speed and inventiveness. To "shrink," however, does not mean to "simplify." As places come closer together, so do people. And people are complicated.

To teach a sensible, fundamental understanding of this shrinking, complicated world -- that surely is the first duty of a modern geography program. Such understanding is needed by the teen-ager. In his lifetime he will be participating in complicated and portentous decisions about the well-being of the human race on earth. You, his teacher, can help him to gain the understanding and insight that he will need.

WHAT KIND OF GEOGRAPHY DO WE TEACH?

Maybe you, like most of us, learned your world geography from textbooks that talked about the continents and countries of the world as though they were isolated islands, having little relationship with each other.

But as a modern American poet has so well said, "There are no islands any more." All of us, teachers and students alike, must begin to understand the interrelationships, complicated as well as simple, that do exist among the continents and countries that make up the world.

It is sometimes difficult for us to change our ways of thinking and learning. Perhaps we have been steeped in political geography, or economic geography, or have thought of man as a vocational statistic. We have become familiar with a fragmentary approach to world society. We have looked at the family of man as in a collection of snapshots. All of these different ways of organizing world geography are valid but they are not complete and coherent.

The teaching program in The World Around Us and in this manual gives the student a complete, coherent view of his world. He sees not a collection of snapshots but a sequence of motion pictures, so to speak, of total societies of men, women, and children as they live and work together in different parts of the world. This sequence reveals not merely the "how" of each society's way of living, but also the "why."

The "why" of living is best explained in terms of the adjustments each society has made to its natural environment -- the things it has had to do to come to terms with nature in its particular part of the earth and the things it has been able to do to make nature serve its basic needs better.

In such settings as these, the big lessons to be learned about intelligent relations between man and his environment, such as the conservation of natural resources, are revealed time and again in terms of their actual effect upon actual people -- rather than as large and contrived abstractions.

There is another important advantage in this kind of world geography. The many different societies of people around the world are not shown as separate and isolated groups. They are shown as parts of the total and complex society of mankind. By examining "society" as a whole, becoming familiar with the similarities as well as the differences that exist among the peoples of the world, the student gets a truly enlightened point of view. He learns, for example, that there are people in the southern United States, Asia, South America, Africa, and Australia who face similar problems in their day-to-day lives. He learns that these people face their problems in ways that are more similar than they are different.

With this approach to world geography, the student also discards the older stereotype about "backward" peoples because he sees that such labels are the result of ignorance, not insight. Instead, he learns to identify the progress of peoples in more meaningful ways -- nomadic, agricultural, industrial.

Through all of this, the student is learning that each part of society faces natural and social problems of great complexity. Out of such sound, comparative studies of how people actually live around the world, the student arrives at the generalization that the world's most vexing problems can be dealt with only by a clear understanding of all peoples. He reaches the conviction that workable solutions to these problems can be found only after we have understood all points of view.

WHAT IS "CLIMATIC" GEOGRAPHY?

A further advantage of this approach to world geography arises from its environmental, or "climatic," organization. Here, students approach people on their own inescapable grounds, cutting across man-made creations such as political boundaries and economic alignments.

In many courses, both before and after their world geography course, children have an opportunity to learn about these important man-made creations. But the geography teacher alone has the opportunity to teach human understandings that lie deeper than political boundaries and economic alignments. For example, read this passage, taken from The World Around Us, about the tropical dry lands that stretch across North Africa and the Middle East: "...When night comes he (the Bedouin) makes for the nearest camp, no matter whose, knowing that he will be welcomed. Even an enemy can claim this hospitality. When he leaves his host's camp, he cannot be attacked for three days -- a distance of a hundred miles by camel." Here is a human custom, centuries old, that goes on regardless of explosive tensions that may exist from time to time between the governments of North Africa and the Middle East.

More than half a century ago professional geographers began to see that they could gain new insights into mankind and his earth if they gave closer attention to the different natural environments in which men live at various places around the world. They probed, analyzed, and classified many things that go to make up any natural environment: elevation of the land, water bodies, soil, flora and fauna, rainfall, temperature, humidity, and so on. While not neglecting any of the things that comprise natural environment, they nevertheless found that the most useful, universal factor of environment, for purposes of analysis and classification, was climate. Man can alter many things in his natural environment, but climate he must learn to live with as he finds it.

Probing further, the professional geographers learned that the natural environments of the earth might be broadly classified according to similar characteristics of their climate.

They found, for example, that climate was quite similar around the Amazon River in South America, along the Congo in Africa, and in a belt stretching along the mainland and islands of Southeast Asia. In each of these areas people had to cope with incessant heat and rain that caused dense vegetation to burgeon from the soil.

These climatic conditions were the central environmental fact in the lives of the people living in each of these widely scattered areas. Each group of people had reacted in different and interesting ways to their natural environment, but these different reactions were strongly conditioned by high temperatures, heavy rainfall, and constant, year-round growth of vegetation.

Thus, the geographers went on to gain valuable insights into the way people live in each of the different climate areas and why they live as they do. To the hot, wet, lush portions of the earth the geographers gave the name "rainforests." Elsewhere, at different places around the earth, they found other natural environments which they called grasslands, deserts, and so on. And from each they gained valuable insights into the "how" and "why" of the lives of people in these areas.

In The World Around Us, and in the teaching methods advocated there and in this manual, we have borrowed from the "climatic" geographers those facts, insights, and learnings that we believe to be appropriate for young teen-agers.

PRIMARY OBJECTIVES AND GENERAL PLANNING

SOMETHING TO KEEP IN MIND -- PRIMARY OBJECTIVES

The World Around Us, as we have said, sets out to make clear to young teen-agers certain broader and deeper understandings about peoples and places and the important interrelationships among them. The purpose of this manual is to help you, the teacher, to equip students with the tools, the skills, the ideas, the attitudes, and the appreciations they need to understand their world and to be at ease among its complexities.

We all know that our best work will be done if our teaching of skills, ideas, attitudes, and appreciations is guided by certain primary objectives. The primary objectives chosen for emphasis in this manual, and often referred to, are as follows:

1. To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

2. To acquaint students with their own country so that they will have a better knowledge and understanding of its position in the world today.

3. To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

4. To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.

5. To teach the value of natural resources and the need for making better use of them through conservation.

6. To develop a real interest in worthwhile leisure activities, such as travel, reading, lectures, museum visits, and observations that will result in a better understanding of the land of the world, the peoples of the world, and their occupations.

INFORMATION, SKILLS, AND ATTITUDES

As you strive toward these objectives, and others, you will be teaching your students much factual information. In textbook and manual you will find many suggestions for teaching information in interesting ways.

You will also be trying to develop in your students the many skills needed for using this information wisely. Thus, you will find here and in the textbook a program for developing important skills -- reading skills, picture-observation skills, and especially a step-by-step program for developing map skills. (A complete list of these map skills appears in the chart on page 10 of this booklet.)

But facts and skills in themselves are not enough, as you know. You also want to develop in your students appreciations and attitudes that will be of lasting value. True, it is hard to control how people feel about anything. And, as you know, you cannot spoonfeed your students overnight with worthwhile appreciations and attitudes. Appreciations are feelings that develop slowly over a long period of time. But you can provide students with the knowledge that may open the door and awaken in them the desire to think and feel on their own.

Here are a few appreciations and attitudes that teachers everywhere have found to be worthwhile. Our effectiveness in encouraging these appreciations and attitudes may be improved if we make a distinction between those which apply primarily to the student's personal life and those which apply primarily to his life as a member of social groups.

Personal Appreciations and Attitudes

1. Willingness to explore new ideas and to investigate problems on his own
2. Appreciation of the beauty and interest to be found in the world of nature
3. Enjoyment of reading about people and places

Social Appreciations and Attitudes

4. Appreciation of other points of view and other ways of doing things
5. Appreciation of the contributions that other people have made to civilization
6. Appreciation of the role the student can play in current affairs and problems that are the concern of all citizens
7. Appreciation of natural environmental controls and our scientific adaptation to them
8. Concern for problems of resource use and conservation
9. Desire to help other people at home and abroad to develop their natural and human resources

PLANNING A FULL-YEAR COURSE

In the weeks and months to come, you will cover a surprising amount of ground in your teaching of world geography. As in any large undertaking, you will first need to make careful long-range plans so that your teaching will be most effective.

Before starting a year's work, many teachers find it useful to look over the whole year's work and to estimate the amount of time that may be devoted to each portion of material. The following suggested time schedule for a year's course in world geography may serve as a point of departure for planning your own year's work. This schedule allows ample time for frequent reviews and evaluations.

Number of Weeks	Units
2	Introduction and pages 8-56
4	Unit One: Rain and More Rain
4	Unit Two: Half Wet, Half Dry
3	Unit Three: Hot, Dry, and Dangerous
4	Unit Four: Sunshine for Sale
4	Unit Five: Warm, Moist Lands
3½	Unit Six: Green and Busy Lands
3	Unit Seven: Lands of Four Seasons
2½	Unit Eight: Where Water Is Life
2½	Unit Nine: Lands Around the Poles
1½	Review and Reference Section
34 weeks	

As you teach each portion of material, the textbook will be your primary teaching tool. But you will wish to use many other tools as well -- films and filmstrips, supplementary readings, pictures, newspapers, projects, and activities. Each of these tools must be evaluated in advance and dovetailed into your plans. In many schools, films and filmstrips must be requested well ahead of the time they will be needed.

You may save valuable time during the year if you estimate how much work can be covered each day of each month. Your long-range plans need not be detailed and they should, of course, remain flexible. The example given on the next page is not meant to be complete or perfect. It is merely one possible long-range plan covering the first month of a school year, and may give you some ideas for your own long-range planning.

(FIRST WEEK) MON.	TUES.	WED.	THURS.	FRI.
Getting Started Use text and exercise in manual Order film for third week, Mon.	Introduction People and places (pp. 8-21) Order filmstrips for second week, Fri. & fourth week, Fri.	Introduction People and Places (pp. 22-33)	This Living Earth Physical Environment (pp. 34-36)	Weather & Climate (pp. 36-40) Get weather map
(SECOND WEEK) MON.	TUES.	WED.	THURS.	FRI.
Changing Environment (pp. 40-43) Schedule filmstrips, projector, & screen for second week, Fri. & third week, Mon.	Map Symbols (pp. 44-47) Large symbols chart, wall maps, globe	Reading Maps (pp. 47-51) Globe and wall maps	Distance and Direction (pp. 51-53) Globe and wall maps	Lat. & Long. (pp. 54-56) Filmstrip, projector, & screen
(THIRD WEEK) MON.	TUES.	WED.	THURS.	FRI.
Tropical Rainforest Introduction Film: "Life in Hot Wet Lands" (pp. 57-58) Film, projector, and screen	Amazonia Intro. & Map Study (pp. 59-61) Exhibit and wall map of S. A.	Amazonia Picture Study (pp. 8-13 and 57-67) Chart Summary Schedule film, projector, & screen for fourth week, Mon.	Amazonia Description & People (pp. 62-65) Order film for fifth week, Mon.	Amazonia Cities & Trade (pp. 65-67) Start committees working Mimeograph map of Amer. Rainforest
(FOURTH WEEK) MON.	TUES.	WED.	THURS.	FRI.
Amazonian Life Film: "Tropical Lowlands" Film, projector, & screen Committee work	Other Am. Rainf. (pp. 67-68) Map cons't Schedule filmstrip, projector, & screen for Fri.	African Rainf. (pp. 69-71) Map study Pictures on transportation	Congo: Land & People (pp. 72-74)	Belgian Congo Filmstrip: "Belgian Congo" Filmstrip, projector, & screen

PLANNING A ONE-SEMESTER COURSE

Perhaps you have only one semester for the teaching of world geography. If so, you will probably want to condense your teaching of some of the chapters of The World Around Us. You can, for example, teach all of the unit introductions as well as the map studies and pictures from the abbreviated chapters. The omitted chapter material and the various "Feature" sections may be assigned to advanced students and fast readers or may be used in committee work. Condensed units can be reviewed by using the "Broader View" and the pertinent thought questions and workshop activities at the end of each unit in the textbook.

Some of your classes may previously have had a course in the geography of the United States. In this instance, you might want to emphasize those chapters that deal primarily with foreign lands, using anything you have to omit as enrichment material.

If your classes have had little previous training in geography or if you want to emphasize the position of the United States in the modern world, you may wish to stress those chapters that deal mainly with the United States. The remaining chapters and features may be used for enrichment.

In either case, the suggested time allotment shown on the next page will enable you to complete your course in half a year.

Number of Weeks	Units
2	Introduction and pages 8-56
2	Unit One: Rain and More Rain
2	Unit Two: Half Wet, Half Dry
1½	Unit Three: Hot, Dry, and Dangerous
1½	Unit Four: Sunshine for Sale
1½	Unit Five: Warm, Moist Lands
1½	Unit Six: Green and Busy Lands
1½	Unit Seven: Lands of Four Seasons
1	Unit Eight: Where Water Is Life
1½	Unit Nine: Lands Around the Poles
1	Review and Reference Section
17 weeks	

Your long-range plan, as suggested above, can then be expanded into daily lesson plans. The textbook and manual provide specific aids and suggestions that you can use to build a wide variety of classroom lessons. The choice of a method of teaching is left to you, since you alone can decide what method or methods will be most successful from day to day with your particular class. Many teachers have found, however, that most worthwhile lessons tend to follow a more or less standard pattern.

SUGGESTED METHODS OF TEACHING

Many of us who are now adult learned in school what little geography we did learn by the "assign and recite" method. Our textbook was a compendium of unrelated facts about the continents and countries of the world. The teacher assigned a certain block of material in the textbook each day. Our success or failure depended upon our ability to recite the boundaries of countries, the capitals and larger cities, and the principal products. Our grade depended largely upon our ability to remember such isolated facts until examination time.

Seldom were we helped by the textbook to relate these facts or to formulate meaningful conclusions.

Sometimes the teacher didn't help much either. What little real interest we could discover in geography was likely to be of the "gee-whiz" kind -- peep show glimpses into oddities of human behavior that the textbook author occasionally dropped in to relieve the tedium.

Today's students are lucky indeed to live at a time when most teachers realize that there is more to geography than isolated facts and disjointed oddities of human behavior. They have the opportunity to see, with the help of a good teacher, whole societies of people around the world -- see them at work, at worship, at play in ways that are as natural to them as our ways are natural to us. From such understanding as this, from such teaching and learning, we may hope that the world's future will be less tortured than its past has been.

Every teacher knows, of course, that students do not acquire much understanding by the frontal approach -- "preaching" the students call it. But the geography teacher today has two effective secret weapons. One is the enlightened textbook which presents not merely facts but which builds toward and inspires an understanding of the world's peoples, their aspirations, and their problems.

The second, and even more powerful, weapon is the insatiable curiosity of all people about all other people. Today's shrunken world has caused all of us, including teen-agers, to become as curious about the daily affairs of remote peoples as we are about the goings and comings of our next-door neighbor. The geography teacher today uses this weapon of human curiosity with great finesse. In the terminology of our profession, we call this weapon motivation. Once the students have been well "motivated," the rest of the learning process -- gathering information, organization and discussion, and evaluation -- is plain sledding.

MOTIVATION

Motivating your students and arousing their curiosity is, then, the first step in the learning process. But a good introduction not only captures the interest and curiosity of your students; it also makes them begin to think about the topic at hand. As they think about the new material, many questions will come to their minds. You too, will have many questions that you will want your class to answer.

The period of motivation should stimulate the questioning spirit but should not furnish immediate answers to the questions. The questions that are raised can be noted and used as the heart of future lessons.

In the sections entitled "Arousing Interest in the Unit" and "Arousing Interest in the Chapter," the manual furnishes many different ideas for motivation.

(For example, see pp. 2 and 5 of Booklet #3.) You may want to follow one or all of these suggestions. They have appeal for many different types of students. Ideas are included that will interest girls as well as boys, those who are eager to investigate and those who are more timid, those who like geography or social studies and those who think they don't. The purpose of each idea and suggestion is to encourage all students to question.

The manual also includes several "Major Questions" that focus attention on the chief ideas in each chapter. (See pp. 3-4 of Booklet #3.) These questions are not the only ones that could be asked, but they are among the most important. Phrasing the important ideas of each chapter as questions provides motivation. You may want to use the "Major Questions" for each chapter to focus attention upon the area to be studied.

GATHERING INFORMATION

Once questions have been raised, the next step is to start finding answers to the questions. Answers are found by gathering pertinent information from various sources. You can help your students to gather facts and information in many different ways, depending on the type of lesson and teaching method you prefer. Further, in any type of lesson, your students will need to learn many different skills in order to find proper information. Here, too, the textbook and manual are of help.

Individual Differences. When a group of students face you in a classroom, they comprise a mixture of abilities, talents, personalities, needs, and backgrounds. Some schools make an attempt to limit this wide range of individual differences within a class by selective grouping. Still, there are amazing differences even within these classes.

In the manual, these differences have been taken into consideration. The sections entitled "Suggestions for Teaching" contain ideas for handling three types of students: the reluctant student, the average student, and the advanced student. The suggestions may apply to individuals within a class or, perhaps, to classes as a whole.

A simple starring system has been used to denote three types of material. One star (*) indicates material particularly suitable for use with the reluctant student. Two stars (**) indicate material effective with average students. Three stars (***) indicate material for the advanced student. (See pp. 8 and 17 of Booklet #3.)

Reading the Textbook. It may seem at first glance that teaching the mechanics of reading is not the responsibility of the geography or social studies teacher. But upon closer examination you will find that your students' ability to read determines in large part their success in geography. Reading geographic material is somewhat different from reading other types of material. Geography reading involves reading for information, along with the use of specialized vocabulary. You will find that it is helpful and necessary to work with your students on their reading skills.

Before the reading of geographic material can be truly effective, your students must be ready to read. The sections of the manual entitled "Arousing Interest in the Unit" and "Arousing Interest in the Chapter" may be used to prepare your students to read. In the textbook the unit introductions, charts of climate facts, chapter introductions, map studies, and pictures may also be used to prepare your students for reading the text.

The reading material of the textbook is divided into short paragraphs, and headings are used frequently to facilitate reading. These headings give a hint to the key ideas contained in the text.

Boxes of "Checking Up" questions are provided at frequent intervals in the textbook to give your students an opportunity to see how well they have understood their reading. For your convenience, answers to these "Checking Up" questions have been included in the manual. (See pp. 9-10 of Booklet #3.)

To aid your students still further in their reading, a thorough program of vocabulary skills has been developed in the book. Words that have special geographic significance or may be new and difficult for your students are italicized. Words that are difficult to pronounce are accompanied by their phonetic pronunciation. The meaning of each word is developed when it first occurs in the text. Each specialized word is used frequently throughout the text to give your students an opportunity to recall, reinforce, and review its meaning. The most important words in a chapter are listed again for easy review at the end of the chapter in the section entitled "Words to Understand." A "Glossary of Words to Understand" is also provided on page 461 in the "Reference and Review Section" of the textbook.

This manual also includes specific suggestions that may be used to guide your students in their reading. The "Major Questions" suggested for each chapter furnish an organizational point for your lessons. The information that answers these main questions is included for your convenience in chart form under the questions. (See p. 4 of Booklet #3.)

At the beginning of each unit in the manual, a diagram shows how the "Major Questions" for each chapter contribute to the six "Primary Objectives." In these diagrams, a general answer is given that summarizes the answers for one particular objective and applies to a climatic region as a whole. (See p. 1 of Booklet #3.)

More specific suggestions for dealing with the reading of geography are given in the "Suggestions for Teaching" in the manual. Although these suggestions may refer to specific methods of teaching, they are flexible and may be adapted to a variety of teaching methods. They may be shifted readily from class activity to group and committee work with little change. You might like to introduce variety in your daily reading plan provided there is no loss in the quality of learning.

Reading Maps. Maps have been called the geographer's microscope. In The World Around Us, your students will learn how to obtain much additional information from maps. The dual aim of the map skills program in The World Around Us is to teach the student how to read the maps in this book and also to give him a firm foundation for reading maps in general.

The thorough program of map study in The World Around Us is one of its distinctive features. Near the beginning of the textbook, starting on p. 44, one whole section is devoted to an introduction of map skills. Only the most basic skills are included here, so that your students can all get started on the right foot. In the "Let's Look at Maps" section of each succeeding chapter, new skills are gradually introduced. Each skill is thoroughly reviewed, reinforced, and maintained throughout the textbook. The manual lists, chapter by chapter, the specific map skills that are being reviewed and the new skills that are being introduced. The answers for the map studies are also given in the manual for your convenience. (See p. 16 of Booklet #3.)

The list on page 10 of this booklet shows the thorough program of map skills that are developed in The World Around Us.

Reading Charts and Tables. In the information-gathering part of your lesson, your students may find it necessary to locate some fact on a chart or table. The "Review and Reference Section" of The World Around Us contains a great deal of valuable information in tabular form about the countries of the world. In the unit introduction, climatic data is included in chart form.

To find the available information, your students must be able to read these charts and tables. The manual provides suggestions for teaching the use of the various charts and tables. It also includes work with mathematics and graphs that you may find useful with some of your students. (See pp. 26-27 of Booklet #3.)

Reading Pictures. Observation skills are also important in the study of geography. Many pictures have been included in The World Around Us to illustrate the reading material. Frequently, additional information can be gained or inferred from these pictures. Many of your students will need guidance in "reading" the pictures and their captions. Several ideas are included in the manual to help you plan picture observations. (See p. 7 of Booklet #3.) These ideas are aimed at developing and strengthening your student's observation skills.

Using Audio-Visual Materials. Observation skills may also be developed through the use of films and filmstrips. While viewing films, each student becomes a world traveler and sees some of the things that have become basic knowledge to him through reading the textbook. The showing of filmstrips enables each member of your class to examine and observe at length, and in detail, many aspects of the world. Each type of visual aid has its purpose; choose whichever serves the objectives of your class.

When properly planned and co-ordinated, the combined use of the textbook and of audio-visual material makes an effective learning device. The manual includes lists of "Selected Audio-Visual Aids" for each chapter in the textbook. (See p. 32 of Booklet #3.) These lists will aid you in your search for the best possible material. to introduce to your classes. The content of each item is described briefly. Information is also given concerning type, source, length of time needed for showing, and other pertinent data.

After the title and date of each item listed, specific information is given in accordance with the following code:

mp - motion picture
fs - filmstrip
b&w - black and white
min - minutes for showing
fr - number of pictures in a filmstrip
# - number of the source

the "Primary Objectives" of The World Around Us.

The textbook provides "Questions to Think About" at the end of each chapter and each unit. These questions can be used to help you and your students evaluate progress. For your convenience, the answers are given in the manual. In addition, the manual also contains "Evaluation Exercises" that will help you to evaluate progress made in the study of each chapter. The answers for these exercises are also given in the manual. (See pp. 10-11 of Booklet #3.)

As a further aid to evaluation, a special booklet of inexpensive teaching tests is available. It is entitled Teaching Tests for use with The World Around Us. (For further information, write to Harcourt, Brace and Company, 750 Third Avenue, New York 17, New York.)

REFERENCE MATERIALS

In teaching geography, you may want to consult books and periodicals that will enrich your own background. The following publications should prove helpful:

BOOKS

Dohrs, F.E., Sommer, L.M., and Petterson, D.R., Outside Readings in Geography, Crowell, 1955.
Heintzelman, Oliver, and Highsmith, Richard, World Regional Geography, Prentice-Hall, 1955.
Kendrew, W.G., Climates of the Continents, Oxford Press, 4th edition, 1953.
Trewartha, Glenn, T., An Introduction to Climate, McGraw-Hill, 3rd edition, 1954.
White, Langdon, and Renner, George, Human Geography, Appleton, 1948.

PERIODICALS

Focus, published monthly by the American Geographical Society, Broadway and 156th St., New York, 32, N.Y.
Geographical Review, American Geographical Society, Broadway and 156th St., New York 32, N.Y.
Journal of Geography, National Council of Geography Teachers, 3333 Elston Ave., Chicago 18, Ill.
National Geographic Magazine, National Geographical Society, 1146 16th St., N. W., Washington 6, D. C.
Social Education, published monthly (October-May) by the National Council for the Social Studies, 1201 16th St., N. W., Washington 6, D. C.
Travel, published by Travel Magazine, Inc., 45 West 57th St., New York 19, N.Y.

OTHER REFERENCES

You and your students may frequently wish to look up specific facts quickly. The following reference books should be made available for class use: Webster's Geographical Dictionary, The World Almanac and Book of Facts, and the Information Please Almanac. The almanacs, published annually, are inexpensive and may be purchased at any bookstore.

The class should also have a reliable atlas. Best results, of course, are achieved if each student can have a world atlas at his desk. Several reliable students' atlases are on the market at reasonable prices.

Occasionally you or your students may wish to send for special maps or publications for use in projects and activities or for display on the bulletin board. Some materials may be obtained from the following sources:

United States Geological Survey (Washington 25, D. C.): (1) Free index maps and circulars for every state as well as Alaska, Hawaii, and Puerto Rico; (2) Topographic maps, 20¢ each; (3) Geological maps.
U. S. Coast and Geodetic Survey (Washington 25, D. C.): Aeronautical charts.
U. S. Soil Conservation Service (Washington 25, D. C.): Soil capability maps and soil survey.
National Geographical Society (National Geographic, 16th and M Streets, N. W., Washington 6, D. C.): Maps which have appeared in back issues of the magazines are available at 50¢ each.
Foreign Government Tourist Agencies (most of them located in New York City): Pamphlets and other advertising material are available upon request.

DIRECTORY OF PUBLISHERS

Abingdon - Abingdon Press, 810 Broadway, Nashville 2, Tenn.
Aladdin - Aladdin Books, 55 Fifth Ave., New York 3, N. Y.
American - American Book Co., 55 Fifth Ave., New York 3, N. Y.
Appleton - Appleton-Century-Crofts, Inc., 35 W. 32nd St., New York 1, N. Y.
Beckley-Cardy - Beckley-Cardy Co., 1900 North Narragansett, Chicago 39, Ill.

Black - Adam & Charles Black, 4, 5, & 6 Soho Square, London, W. I., England
Bobbs - Bobbs-Merrill Co., Inc., 730 N. Meridian St., Indianapolis 7, Ind.
Coward-McCann - Coward-McCann, Inc., 210 Madison Ave., New York 16, N.Y.
Crowell - Thomas Y. Crowell Co., 432 Fourth Ave., New York 16, N. Y.
Day - John Day Co., Inc., 210 Madison Ave., New York 16, N.Y.
Dodd - Dodd, Mead & Co., Inc., 432 Fourth Ave., New York 16, N. Y.
Doubleday - Doubleday & Co., Inc., 575 Madison Ave., New York 22, N. Y.
Duell - Duell, Sloan & Pearce, Inc., 270 Madison Ave., New York 16, N. Y.
Dutton - E. P. Dutton & Co., Inc., 124 E. 30th St., New York 16, N. Y.
Fideler - Fideler Co., 40 Ionia Ave., N. W., Grand Rapids 2, Mich.
Friendship Press - Friendship Press, 257 Fourth Ave., New York 10, N. Y.
Grosset - Grosset & Dunlap, 1107 Broadway, New York 10, N. Y.
Harcourt - Harcourt, Brace & Co., Inc., 750 Third Ave., New York 17, N. Y.
Harper - Harper & Brothers, 49 E. 33rd St., New York 16, N. Y.
Heath - D. C. Heath & Co., 285 Columbus Ave., Boston 16, Mass.
Holiday - Holiday House, Inc., 8 W. 13th St., New York 11, N. Y.
Holt - Henry Holt & Co., Inc., 383 Madison Ave., New York 17, N. Y.
Houghton - Houghton Mifflin Co., 2 Park St., Boston 7, Mass.
Knopf - Alfred A. Knopf, Inc., 501 Madison Ave., New York 22, N. Y.
Lippincott - J. B. Lippincott Co., E. Washington Sq., Philadelphia 5, Penna.
Little - Little, Brown & Co., 34 Beacon St., Boston 6, Mass.
Longmans - Longmans, Green & Co., Inc., 55 Fifth Ave., New York 3, N. Y.
Lothrop - Lothrop, Lee & Shepard Co., Inc., 419 Fourth Ave., New York 16, N. Y.
Lyons & Carnaham - Lyons & Carnaham, 2500 Prairie Ave., Chicago 16, Ill.
McBride - Medill McBride Co., 200 E. 37th St., New York 16, N. Y.
McGraw-Hill - McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y.
McKay - David McKay Co., Inc., 55 Fifth Ave., New York 17, N. Y.
McKnight - McKnight & McKnight Publishing Co., U.S. Route 66, at Towanda Ave., Bloomington, Ill.
Macmillan - The Macmillan Co., 60 Fifth Ave., New York 11, N. Y.
Macrae Smith - Macrae Smith Co., 22 S. 15th St., Philadelphia 2, Penna.
Charles Merrill - Charles E. Merrill Co., Inc., 1250 S. Fairwood Ave., Columbus 16, Ohio.
Messner - Julian Messner, Inc., 8 W. 40th St., New York 18, N. Y.
Morrow - William Morrow & Co., Inc., 425 Fourth Ave., New York 16, N. Y.
Nelson - Thomas Nelson & Sons, 19 E. 47th St., New York 17, N. Y.
Norton - W.W. Norton & Co., Inc., 55 Fifth Ave., New York 3, N. Y.
Oxford - Oxford University Press, Inc., 114 Fifth Ave., New York 11, N. Y.
Pantheon - Pantheon Books, Inc., 333 Sixth Ave., New York 14, N. Y.
Penn - The Wm. Penn Publishing Corp., 221 Fourth Ave., New York 3, N. Y. - Books prior to 1943 sold by Knopf; after 1943, Tudor.
Pilgrim - Pilgrim Press, 14 Beacon St., Boston 8, Mass.
Rand McNally - Rand McNally & Co., P. O. Box 7600, Chicago 80, Ill.
Random House - Random House, 457 Madison Ave., New York 22, N. Y.
Rinehart - Rinehart & Co., Inc., 232 Madison Ave., New York 16, N. Y.
Row-Peterson - Row, Peterson & Co., 1911 Ridge Ave., Evanston, Ill.
Scott - Scott, Foresman & Co., 433 E. Erie St., Chicago 11, Ill.
Scribner - Charles Scribner's Sons, 597 Fifth Ave., New York 17, N. Y.
Silver - Silver Burdett Co., Everett Bldg., 45 E. 17th St., New York 3, N. Y.
Simon-Schuster - Simon & Schuster, Inc., 630 Fifth Ave., New York 20, N. Y.
Tudor - Tudor Publishing Co., 221 Fourth Ave., New York 3, N. Y.
Viking - The Viking Press, Inc., 625 Madison Ave., New York 22, N. Y.
Watts - Franklin Watts, Inc., 699 Madison Ave., New York 21, N. Y.
Westminster - The Westminster Press, Witherspoon Bldg., Philadelphia 7, Penna.
Wheeler - Wheeler Publishing Co., 161 E. Grand Ave., Chicago 11, Ill.
Whitman - Albert Whitman & Co., 560 W. Lake St., Chicago 6, Ill.
Whittlesey - Whittlesey House, c/o McGraw-Hill Book Co., Inc., 300 W. 42nd St., New York 18, N. Y.
Wilcox - Wilcox & Follett Co., 1000 West Washington Blvd., Chicago 7, Ill.
Winston - John C. Winston Co., 1010 Arch St., Philadelphia 7, Penna.
World - The World Publishing Co., 2231 W. 110th St., Cleveland 2, Ohio.

DIRECTORY OF FILM SOURCES

1. A. F. Films, Inc., Room 1001, 1600 Broadway, New York 19, N. Y.
2. Academy Films, Box 3088, Hollywood, Calif.
3. Allis-Chalmers Mfg. Co., Tractor Division, Advertising Dept., Milwaukee 1, Wisc.
4. Athena Films, Inc., 165 W. 46th St., New York 19, N. Y.
5. Atlantis Productions, P. O. Box 46216, Hollywood 46, Calif.
6. Audio-Visual Associates, Bronxville 8, N. Y.
7. Audio Visual Enterprises, P. O. Box 15686, Los Angeles 8, Calif.
8. Australian News & Information Bureau, 636 Fifth Ave., New York 20, N.Y.
9. Bailey Films, Inc., 6509 De Longpre Ave., Hollywood 28, Calif.
10. C. O. Baptista Films, Sunnyside Ave., Wheaton, Ill.
11. Arthur Barr Productions, 1265 Bresee Ave., Pasadena 7, Calif.
12. Stanley Bowmar Co., 12 Cleveland Ave., Valhalla, N. Y.
13. Bray Studios, Inc., 729 Seventh Ave., New York 19, N. Y.

14. British Information Services, 30 Rockefeller Plaza, New York 20, N. Y. (Other offices throughout the U. S.)
15. Herbert E. Budek Co., 55 Popular Ave., Hackensack, N. J.
16. Canadian Consulate General, 80 Boylston St., Boston 16, Mass. (Write for office that serves your district.)
17. Carlin Films, Inc., 450 W. 56th St., New York 19, N. Y.
18. George W. Colburn Laboratory, Agency for International Harvester Co., Film Library, 164 N. Wacker Drive, Chicago 6, Ill.
19. Commonwealth of Virginia, State Board of Education, Richmond 16, Va.
20. Coronet Films, Coronet Bldg., Chicago 1, Ill. (Dealers in 39 States.)
21. Curriculum Films, Inc., distributed by Educational Projections, Inc., 10 E. 40th St., N. Y. 16, N. Y.
22. Edited Pictures System, Inc., 165 W. 46th St., New York 19, N.Y.
23. Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill. (Offices in principal cities.)
24. Eye Gate House, Inc., 2716 41st Ave., Long Island City 1, N. Y.
25. Film Research Associates, 304 Pinebrook Blvd., New Rochelle, N. Y.
26. Films of the Nations Distributors, Inc., 62 W. 45th St., New York 36, N. Y.
27. Filmsets, Inc., 1956 N. Seminary Ave., Chicago 14, Ill., or 52 Vanderbilt Ave., New York 17, N. Y. (Address office nearest your home)
28. Firestone Tire & Rubber Co., Public Relations Dept., Akron 7, Ohio
29. Fleetwood Films, Inc., 10 Fiske Place, Mount Vernon, N. Y.
30. Ford Motor Co., 16 E. 52nd St., N. Y. 22; The American Road, Dearborn, Mich; 4303 Telegraph Ave., Oakland 9, Calif. (Address office nearest your home.)
31. Gateway Productions, Inc., 1859 Powell St., San Francisco 11, Calif.
32. Goodyear Tire & Rubber Co., Inc., Motion Picture Dept., 1144 E. Market St., Akron, Ohio, or Box 3339 Terminal Annex Station, Los Angeles, Calif. (Address office nearest your home.)
33. Government of India Information Service, (distributed by Ideal Pictures Corp., 58 E. South Water St., Chicago 1, Ill.)
34. Paul Hoefler Productions, 7934 Santa Monica Blvd., Los Angeles 46, Calif.
35. Hollywood Film Enterprises, Inc., 6060 Sunset Blvd., Hollywood 28, Calif.
36. Ideal Pictures Corp., 58 E. South Water St., Chicago 1, Ill. (Branch offices in 26 large cities.)
37. Informative Classroom Picture Publishers, 31 Ottawa Ave., N. W., Grand Rapids, Michigan.
38. Institute of Inter-American Affairs, 499 Pennsylvania Ave., N. W., Washington 25, D. C.
39. Instructional Films, Inc., 1150 Wilmette Ave., Wilmette, Ill. (Offices in principal cities.)
40. International Film Bureau, Suite 308-316, 57 E. Jackson Blvd., Chicago 4, Ill., or 20 W. 55th St., New York 19, N. Y.
41. International Film Foundation, Inc., 345 E. 46th St., New York 17, N. Y.
42. Knowledge Builders, 625 Madison Ave., New York 22, N. Y.
43. Library Films, Inc., 25 West 45th St., New York 19, N. Y.
44. Life Filmstrips, 9 Rockefeller Plaza, New York 20, N. Y.
45. McGraw-Hill Book Co., Text Film Dept., 330 W. 42nd St., New York 18, N. Y.
46. Minneapolis-Moline Co., Minneapolis 1, Minn.
47. Modern Talking Picture Service, Inc., 45 Rockefeller Plaza, New York 20, N. Y.
48. Museum Extension Service, 10 E. 43rd St., New York 17, N. Y.
49. National Film Board of Canada, 1270 Ave. of the Americas, New York 20, N. Y., or 400 W. Madison St., Chicago 6, Ill. (Address nearest office.)
50. The New Zealand Embassy, 19 Observatory Circle, Washington 8, D. C.
51. Official Films, Inc., Grand & Linden Ave., Ridgefield, N. J.
52. Pan American Union, Publications & Promotion Sect., Washington 6, D. C.
53. Popular Science Publishing Co., distribution by McGraw-Hill, 330 W. 42nd St., N. Y.
54. Progressive Pictures, 6351 Thornhill Dr., Oakland 11, Calif.
55. Research Survey, Inc., 8 W. 40th St., New York 18, N. Y.
56. Santa Fe Railway Co., Film Bureau, 80 E. Jackson Blvd., Chicago 4, Ill.
57. Silver Burdett Co., 45 E. 17th St., New York 3, N. Y.
58. Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago 14, Ill.
59. Stillfilm Inc., 35 S. Raymond Ave., Pasadena 1, Calif.
60. Teaching Film Custodians, Inc., 25 W. 43rd St., New York 36, N. Y.
61. The Texas Company, 135 E. 42nd St., New York 17, N. Y.
62. Union Pacific Railroad, Motion Picture Bureau, 1416 Dodge St., Omaha 2, Nebr.
63. University of Michigan Audio-Visual Education Center, 4028 Administration Bldg., Ann Arbor, Mich.
64. United States Bureau of Mines, Graphic Services Section, 4800 Forbes St., Pittsburgh 13, Penna.
65. United World Films, Inc., 1445 Park Ave., New York 29, N. Y.
66. Visual Education Consultants, Inc., 2006 Helena St., Madison 4, Wisc.
67. Washington State Apple Commission, P. O. Box 942, Yakima, Wash.
68. World Neighbor Films, P. O. Box 1525, Santa Barbara, Calif.
69. Young American Films, Inc., 18 E. 41st St., New York 17, N. Y.

GETTING ACQUAINTED WITH THE WORLD AROUND US

BOOKLET #2

Getting Your Students Started . 1
Your Own Look Ahead 3
People and Places 4
This Living Earth 5
Let's Look at Maps. 14

GETTING YOUR STUDENTS STARTED

There are many ways in which you can introduce your students to their study of geography and to their new textbook. Discussing a current event is one way. You can explain to your class that geography provides useful background information about people, places, and things in the news. Many news items that are important today may eventually be written about in textbooks. In order to understand the full significance of these current events, we must know where the event happened, who was involved, why it is important to us, and other points of information that make the event more meaningful.

You can explain to your class that news events that they read about in the newspapers, see on television or in the movies, or hear about over the radio are better understood when something is known about the geography of the region involved.

You may select any current event to show your class how geography can provide useful information. For example, as this manual is being prepared, an explosion of dynamite in Cali, Colombia, has killed hundreds of people. If geography is about people and places and shows relationships between man and his environment, then your class will expect to find background information about Cali and Colombia by looking at a geography textbook. Where is Colombia? Where is Cali? Why are these places important? Who lives there? How do most of the people make a living? All of these questions can be answered by a study of geography.

To illustrate this point, have your students look at their new geography textbook. To draw their attention to the book, you might ask, "What does the title tell us about this book? Why might we expect to find information about Cali and Colombia in a book such as this?" The title indicates that this book tells about things in the world around us. Cali and Colombia are part of the world. "What other evidence on the front and back cover shows that this book tells about many different parts of the world?" The color pictures on the cover show different parts of the world. The large picture on the front shows Mt. Fujiyama in Japan. The smaller one is an autumn scene in the northeastern part of the United States. The large picture on the back is of the Riviera Coast of the Mediterranean Sea, while the smaller one is a scene in the southwestern part of the United States.

You may now suggest that students turn to the title page of the book and ask them what they see there that tells them further that this is a book about world geography. Since world geography is an important and vital study for teen-age students, the title page shows two students looking at hemisphere maps picturing most of the world. On the facing page, the beautiful picture of a mountain valley in Peru suggests again that we will learn about many faraway and interesting places in this book.

While students are still looking at the title page, ask them who wrote this geography book. The author is Zoe A. Thralls, professor of Geography and Education at the University of Pittsburgh.

Ask the students what other names appear on the title page, and why. You can explain that books such as this one are never prepared by one person alone. Many other people contribute work, ideas, and suggestions. Lewis Paul Todd, as General Editor, advised the publisher and author about many things during the preparation of the book. Dr. Todd is also editor of Social Education, the official journal of the National Council for the Social Studies. In order to make sure that all of the material in THE WORLD AROUND US was suitable for use with secondary students, Jessie M. Wakeman used the material with her classes in Sturgis, Michigan, and gave valuable suggestions based on her experience. The maps that appear throughout the book were designed and drawn by Harold Faye, who is a geographer and cartographer. If your class desires additional information about the author and the other people who are listed on the title page, they can find it on the copyright page, which is on the back of the title page.

The copyright date is also given on the copyright page. It is important to check the copyright date in a geography book to make sure that the book was published recently enough so that most of its information is up to date. The copyright page also gives a list of picture credits.

Studying the Table of Contents

After your class has finished looking at the title page and copyright page of the book, you can draw their attention to the "Contents" on pp. 5-6. Ask whether anyone can find Cali or Colombia listed in the Table of Contents.

As they study the "Contents," students will find that THE WORLD AROUND US has three introductory sections entitled "People and Places," "This Living Earth," and "Let's Look at Maps." They will then notice that most of the "Contents" provides a listing of the Units and Chapters of the book. They will also discover that the "Contents" gives a further breakdown listing the name of the climatic region and the continent to which each chapter refers. They may also notice that there is a "Reference and Review" section at the end of the "Contents." However, your class may be surprised to find that there is no mention of Cali or Colombia in the "Contents." You can then explain that the "Contents" lists only the main headings of things that are included in the book. The "Contents" is a useful guide that shows us how the material in the textbook is organized and helps us find large general topics.

Using the Index

You may then want to ask your class what part of the book would be most useful in helping them locate information about Cali and Colombia. Someone will probably say the Index. Have your students turn to the beginning of the Index on p. 465.

Before your class tries to use the Index, ask one of your students to read to the class the notations about the use of the Index on p. 465. Here they will learn that the boldface numbers in the Index refer to pages containing maps, the italicized numbers refer to pages on which pictures appear, and the regular numbers refer to pages on which they will find reading material.

Now, have your students look for Cali in the Index.

Here they will learn first how to pronounce the name of this city. Then, by following the boldface reference given under Cali, your class will be able to locate the city on the political map of South America on p. 431, in the "Reference and Review" section of the text.

Next, have the class look up Colombia in the Index.

They will discover on the political map on p. 431 that Colombia is located in the northwestern part of South America. Other maps are available on p. 61 and p. 117. They can find a table giving vital facts about Colombia on p. 429. In the text on p. 68 they can find information about products that are sent from Colombia to other parts of the world. The picture and picture caption on p. 115 provide further information about the kind of land and occupations found in Colombia. Finally, all of the facts about Colombia are summarized on p. 406 of the "Review" section.

When your class has examined the various references in connection with the current event, you have accomplished two purposes. First, you have demonstrated that geography is both helpful and necessary for our understanding of the world in which we live. Second, you have introduced your students to various parts of the textbook that they will find helpful in their future studies.

EXERCISE ON THE USE OF THE TEXTBOOK

The following exercise can be used in several ways. It can be made into a game with the class participating in teams. The questions can also form the basis of a group discussion, or they can be assigned individually to be answered in class, or done overnight and discussed the following way.

Directions: Use THE WORLD AROUND US as your reference to find the answer to each of the following questions. Be prepared to tell the class which part of the book helped you most in locating the answer and how you used that part to help you.

Question	Answer	Method
1. Where does the unit introduction on Tropical Dry Lands start?	p. 125	"Contents," p. 5. Title: "Hot, Dry and Dangerous."
2. On what page is there a picture of salmon?	p. 252	"Index" under salmon. Italicized number.
3. How do you pronounce Jakarta?	yuh-KAHR-tuh	"Index" under Jakarta.
4. Where does the chapter entitled "Our Booming Pacific Northwest" begin?	p. 243	"Contents"," p. 6. By title.
5. On what pages can information about chestnuts be found?	pp. 165-166	"Index" under chestnuts.
6. Where are the feature articles in the unit on moist semitropical lands?	pp. 233, 236, 237	"Contents," p. 6. Unit title: "Warm, Moist Lands," and "Climatic Regions" column.
7. Where can you find a population map of the world?	pp. 416-417	"List of Maps," p. 7. Or "Index," subtitle under population maps.
8. Where can you read about Roald Amundsen, the explorer?	p. 392	"Index," sub-heading under exploration.

THE INTRODUCTION: YOUR OWN LOOK AHEAD

You and your students are part of the huge family of mankind. All of us are motivated by our basic need for food, shelter, and clothing. Some people find it difficult to satisfy these needs because the forces of nature handicap them. Others find it relatively easy to secure these essentials and have enough time, energy, and money left over to give fuller attention to other needs which bring happiness and meaning to life. Among these other needs are religion, government, education, recreation, and community life.

In the pictorial preview, "People and Places Around the World" (pp. 8-33), your students will get a glimpse of how different societies of the world, in several different localities, fulfill their needs. Your students will observe three societies of people living and working in environments where food, clothing, and shelter are hard to provide. They will observe three other societies which find it easier to satisfy their needs because of favorable natural conditions.

"This Living Earth" (pp. 34-43) explains how everyone in the world is directly or indirectly dependent on the earth in making a living. Everyone is dependent on natural environment for food, clothing, and shelter.

Your students may feel that natural environments are changeless, but changes are taking place on the face of the earth everyday. Some of these changes are slow physical changes, often unnoticed by the unscientific observer. Other physical changes are dramatic and attract a great deal of attention. A violent earthquake, an erupting volcano, or a hurricane all become front-page news items. These rapid changes are observed as they affect the world's people.

Man has learned to control many of the natural phenomena of the earth, but he has been least successful in his control of the climate. Yet, it is climate which decides to a great extent the type of natural environment that exists in any given place. In these introductory sections, climate is defined simply as weather history. The same elements that make up the daily weather report, when averaged over a long period of time, become climate. Your students have an opportunity to become familiar with these elements of weather which produce climate.

Finally, in "Let's Look at Maps" (pp. 44-56), you can show your students how maps may be used to get a close look at the world. You can also begin to teach them the basic skills necessary for understanding the maps in this book and for interpreting maps in general.

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FOR YOUR OWN READING

You may be personally interested in some of the background reading contained in the following selections, and you may find there some passages that you might like to call to the attention of your advanced students.

D. H. Davis, The Earth and Man, Part I, Introduction, "Growth of Geography;" Part II, "Man and Environment;" Part III, "Limiting Effects of Environmental Factors." (Macmillan)
T. Morris Lonstreth, Knowing the Weather. (Macmillan)
S. F. Markham, Climate and the Energy of Nations. (Oxford)
Hans H. Neuberger and F. B. Stevens, Weather and Man.
M. L. Anderzhon, Steps in Map Reading. (Rand McNally)

……

PEOPLE AND PLACES AROUND THE WORLD (pp. 8-33)

You may want to orient your students for study by previewing some of the people and places they will examine more closely during the year. A good introduction for this preview is found on pp. 8-9. One of your students might read this section orally. Attention can be drawn to the map and the representative photographs on these pages.

You can start a class discussion by asking your students to suggest some questions that they think newspaper reporters might ask. As members of the class answer, examples of the questions may be written on the board. After some have been written, ask one or two students to underline the key word in each question. Words such as, where, when, why, how, what, who, and how many should be evident. Explain that reporters have to ask many questions, such as these, in order to get the true facts. Remind your class that they, too, will need to ask many questions about the pictures and text in the following pages.

You can also prepare your class to look at the pictorial introduction by having an average student look up the present population figure of the world in an almanac or atlas. The number will probably mean very little to your students. Comparisons sometimes help, such as: "enough people to hold hands and go around the world 104 times," or "10 times the distance to the moon," or "16 times as many people as live in the United States," or "about 340 times as many people as live in New York City." Point out that all of these people comprise many different races and nationalities. They speak different languages and have different customs. They are scattered over the entire face of the earth. Yet, all of these people have certain things in common. They all have the same basic needs. Ask the class to mention what some of their own basic needs are. (Need for food, clothing, shelter, government, education, religion, recreation, and community life.) Then have students read page 10 to see whether their needs are actually the same as those of people everywhere in the world.

As your class studies the pictures and reads the captions on pp. 12-33, suggest that they look for the various ways in which people try to satisfy their basic needs. A detailed study of the pictures is not necessary at this time, although you may wish to answer some questions as they come up. (Suggestions for more detailed picture observation, making use of the pictures on these pages, will be given in later chapters of the manual.) As the class reads and observes, the information could be summarized in chart form on the board. Your completed chart might look something like this:

Picture and Reading Summary

Pages	Food	Shelter	Clothing	Other Needs
12-13	vegetables	huts made of forest material	little	Education - father teaching sons. Recreation shown in some. Community life.
14-17	milk & cheese	tents	long robes	Some recreation shown.
18-21	wild game and fish	tents, huts, igloo	hides	Celebration part of recreation.
22-25	seafood, many fruits & vegetables	towns & cities	like ours	
26-29	fish, meat, many vegetables	towns & cities, stone houses	like ours	
30-33	many kinds	cities, wooden houses		

Your students will probably have noticed that the people in the first three groups of pictures (pp. 11-21) lead rather difficult lives. In the last three groups (pp. 22-33), they may have seen that the people lead much more varied and less difficult lives. You might ask these questions: "Why do the people in the first three groups of pictures find it hard to satisfy their basic need for food, shelter, and clothing?" (Their natural surroundings are unfavorable.) "Why are the people in the last three groups able to solve the same problems more easily?" (Their surroundings are more favorable.)

You could tell your students that they have now seen some of the people and places as they exist in the world. They have read about some of the problems that these people face in their daily lives. You can point out that in geography class, they will dig much deeper, delving into the whys and hows of things they see and read about in the world around them. What at first will appear to be a jumble of many differences, will slowly begin to make sense. They will discover that people everywhere, no matter where or how they live, are attempting to satisfy their needs, and their way of going about their tasks is usually conditioned by their surroundings.

THIS LIVING EARTH (pp. 34-43)

Before your class can properly tackle the job of studying about the people of the world, you will need to direct their thinking to some very general but important basic concepts about the earth on which these people live. Through the pictorial introduction, your class saw that people everywhere are striving to satisfy their need for food, clothing, and shelter. The ease with which these necessities are provided is often determined by the nature of the surroundings. The more favorable the surroundings are, the easier it is for people to secure the necessities of life, and the more time and money they may devote to other things which make life meaningful and happy.

In "This Living Earth," you will be able to guide your students one step further in their thinking process. As they study, they will begin to see why environments differ and why some are more favorable than others. You will no doubt want to emphasize the importance of climate in determining whether environment is favorable or unfavorable. In this section, the fundamentals of climate are explained in simple terms. If your class has previously studied the elements that make up climate, this section can be used for review. If the material is unfamiliar, the section can be used to teach basic information. You will have to decide how much time is needed for mastering these basic tools.

"This Living Earth" is divided into several parts to aid your class in their reading.

1. "People and the Earth," pp. 34-36, tells how everyone is directly or indirectly dependent upon the earth.
2. "Climate, Nature's Most Important Fact," pp. 36-40, defines and explains the six most important factors of weather that constitute climate.
3. "This Restless Earth," pp. 40-41, explains some of the rapid and dramatic changes that can occur in the natural environment.
4. "Leaning to Live with Nature," pp. 42-43, stresses the importance of conservation and shows how man has been able to control or direct some of the forces of nature.

MAJOR QUESTIONS

The study of "This Living Earth" can be organized around three important questions to which your students might seek answers. Each of these questions is related to one of our large objectives in teaching geography. The factual information that provides the answers is given below for your use in the classroom. The questions may be used to motivate your students, to help them organize factual information, or to evaluate progress.

Primary Objective:

To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.

→

Major Question #1:

How do people depend upon the earth?

Occupations that Depend upon the Earth

Directly	
Farming	Use of the soil
Mining	Use of minerals
Fishing	Use of sea life
Hunting	Use of wild life
Trapping	Use of wild life
Lumbering	Use of forests
Ranching	Use of grasses
Herding	Use of grasses

Indirectly	
Transporting	Hauls nature's raw materials, manufactured good, and workers.
Manufacturing	Makes products from nature's raw materials.
Processing	Gets nature's raw material ready to be used.
Distributing	Sells the raw material, manufactured, or processed goods.
Servicing	Offers services to the people employed in the other occupations

Primary Objective:

To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.

→

Major Question #2:

What is climate?

AVERAGE TEMPERATURE + AVERAGE HUMIDITY + AVERAGE PRECIPITATION + AVERAGE FROST-FREE PERIOD = CLIMATE

Primary Objective:

To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.

→

Major Question #3:

How is man learning to control some aspects of a changing environment?

Changes in the Environment

Not Controlled by Man		Controlled by Man	
Earthquakes	Loss of life, destruction of property, tidal waves.	Floods	Levees, dams, and other flood control measures.
Volcanoes	Loss of life, destruction of land.	Erosion	Soil conservation methods.
Hurricanes	Floods, destruction by wind, tidal waves.	Forest Destruction	Forest conservation methods.
Tornadoes	Destruction of life and property.	Drought	Water conservation, dams, irrigation projects.

SUGGESTIONS FOR TEACHING

In teaching the important information contained in "This Living Earth," you might like to use some of the suggestions that follow. You will find ideas for motivating your students and for helping them to organize their reading of the text, suggestions for teaching vocabulary and using weather data and graphs, and ideas for guiding reluctant, average, and advanced students.

Arousing interest. To create interest in your lessons about "This Living Earth," you might ask your students to recall information learned in the pictorial introduction and to compare it with their own experiences. You might ask an average or reluctant student to recall the three basic needs of mankind (food, shelter, clothing). These can be listed on the board. Then, have each member of the class write down how his family satisfies these basic needs. When your students have completed their lists, another member of the class might recall the other needs that are necessary to give happiness and meaning to life (government, education, religion, recreation, and community life). The class can then furnish their personal information for these items. Finally, they should be able to fill in all the information for the Indians of the hot, wet forests also. With reluctant students, you might have them look back to pp. 11-13 in order to recall this information. The comparison will look something like this. (Three-star material indicates information that may be supplied by advanced students.)

	My Family	Indians
Food	Great Variety	Mostly vegetables
Clothing	Shirts, pants, dresses, skirts, blouses, shoes, socks, etc.	Little is worn
Shelter	Brick, stone, wood	Forest material
Government	Democracy, federal, state, and local government	Tribal***
Education	School, church, family	Family
Religion	Protestant, Catholic, Jewish, etc.	Tribal***
Community	Village, town, city	Village
Recreation	Sports, dancing, music, T.V., movies, radio, etc.	Feasts, music, dancing

You might then explain to the class that it is necessary to work to fulfill all of these basic needs. Ask one of your students to tell the class about his father's job and how money is earned to buy food and clothing and to provide shelter. An advanced student could explain how the money that is left over goes to support the government and to provide education and recreation. Ask the class how these ways of satisfying needs differ from those of the Indians.

Once the parallels have been made, see whether anyone can answer why there are so many differences between our ways and the Indian's ways of solving these basic needs. (If your class cannot suggest an answer, you can tell them that they will find answers as they read "This Living Earth.") This type of questioning sets the stage for a reading of the first two columns of p. 34. These columns might be read orally to focus your students' attention on the "how" and "why" type of questioning.

Reading about People and the Earth (pp. 34-36). The reading material on pp. 34-36 contains many leads for class discussion. You may wish to stop at various intervals along the way to discuss what has been read, to answer questions, or to hear some of your students' first-hand experiences that the reading has recalled. This type of reading and discussion is effective, especially with reluctant students. For this reason, many teachers find it helpful to have early reading assignments read orally. You could either select the readers or call on volunteers. To get most active participation, you might have as many different students read as possible.

Once the reading selection is completed, the "Checking Up" questions on p. 36 make a good summary. The reluctant students might try to write the answer to question #1, the average to #2, and the advanced to #3. If the written answers are then given orally, each person in the class is able to contribute something to the answering. If your students are aware that everyone depends upon the earth directly or indirectly in order to satisfy his needs, your lesson has accomplished its purpose.

Reading about Climate (pp. 36-40). The reading material about "Climate, Nature's Most Important Fact," on pp. 36-40, contains several words that may be unfamiliar to your students. The phonetic pronunciation and the meaning of each word is given in the text. If your class is reading orally, have the student who is reading attempt to pronounce the word. You might want to have several other students pronounce it. Then, ask the whole class to say it. The same process may be used to teach the meaning of the word. Finally, you may want to write the word and its meaning on the board.

If your students are keeping geography notebooks, they might find it helpful to devote a page to new and important words. The following words might be included:

New and Important Words

Atmosphere	The air around us or above us during any one short period of time.
Climate	An average of the weather over a long period of time.
Weather	A temporary condition of the atmosphere.
Temperature	The amount of hotness or coldness of the air.
Thermometer	An instrument used to measure temperature.
Fahrenheit	A type of thermometer scale.
Degrees	Little marks on thermometers that show the amount of hotness or coldness.
Average Temperature	An average of many temperature readings.
Humidity	The water vapor in the air.
Per-cent	Parts of 100.
Humid	Moist
Precipitation	Moisture that has been released from the atmosphere (rain, dew, snow, sleet, hail, frost, fog).

Growing Season	The frost-free period, or the number of days between the last killing frost in the spring to the first killing frost in the fall.

These words will be used frequently throughout the book whenever climate is discussed. Your class may find it helpful to practice, use, and review these words from time to time. Flash card drills provide a quick and efficient way to review vocabulary.

Collecting Weather Data. The technical and statistical part of the study of weather and climate can be made most meaningful if the class can observe and collect its own weather data.

With reluctant students, this record-keeping process should be kept simple. These students can keep a chart on the chalkboard, the bulletin board, or in their notebooks. The project can be an individual, group, or class activity. These students need observe only four aspects of the daily weather and put them in a simple chart, such as this one:

Weather Observations*

	Mon.	Tues.	Wed.	Thurs.	Fri.
Sunny or Cloudy	Sunny	Cloudy	Cloudy	Sunny	Cloudy
Temperature	Hot	Hot	Mild	Mild	Cool
Precipitation	none	none	rain	none	none
Wind	little	little	strong	little	little

The average students can be more precise in their records and may want to include other factors in their observations. This group may want to obtain or make a few simple weather instruments to aid them with their observations. Several of the books listed in the "Student Reading List" on p. 13 of this booklet contain plans and ideas for observing the daily weather.

When instruments are not obtainable, much of the weather data can be gathered from weather reports in the newspaper, on television, or on the radio. This group's chart of weather data may look like this:

Weather Observations**

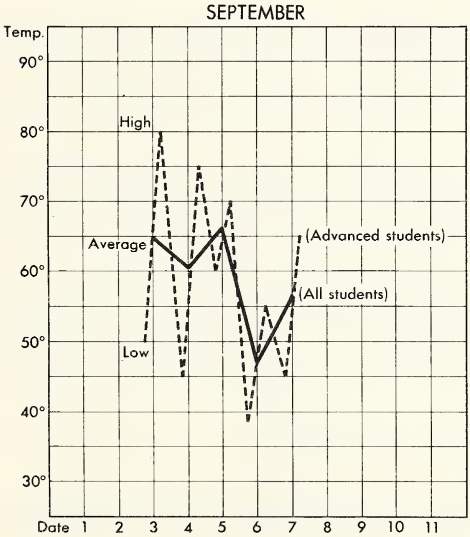
	Mon.	Tues.	Wed.	Thurs.	Friday	Total or Average
Sunny or Cloudy	Cloudy	Partly cloudy	Sunny	Cloudy	Partly cloudy	
Temperature low high average	50° 70° (60°)	51° 73° (62°)	50° 80° (65°)	55° 75° (65°)	50° 70° (60°)	62°
Precipitation	Rain .5"	None	None	Rain .5"	None	1"
Wind	NE	N	NW	NE	NW	
Humidity	98%	80%	60%	99%	60%	79%

The advanced students will really want to get into details with their observations. This group may want to write to the Weather Bureau in Washington 25, D. C. for the Educational Series, a packet of material on weather and how to record it. If you do not sign their letter, be sure to tell them to enclose $.15. This group may also want to consult books on the "Students Reading List" or perhaps keep copies of the daily weather maps that appear in newspapers.

The advanced group may want to visit, or write to, the nearest office of the Weather Bureau to obtain climatic statistics for your community. These statistics are useful because your students are then able to compare the climate facts of their community with the "Climate Facts" at the beginning of each unit in the textbook. The Weather Bureau should be able to furnish you with the average temperature, average precipitation, and average humidity for each month plus the highest recorded temperature, the lowest recorded temperature, and the average frost-free perfod for the area around your community.

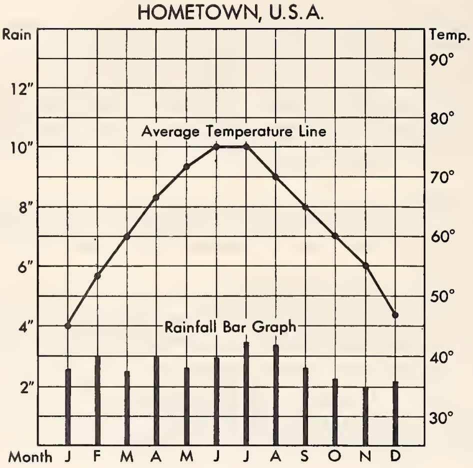
The advanced students' data may resemble that of the average group, perhaps with the addition of barometer readings, wind velocity, and cloud types. This group may even want to try their hand at forecasting to see whether they can actually predict the weather.

Use of Graphs. The work with climatic data also gives you an opportunity to teach the construction and use of graphs. A line graph can be used to record average daily temperatures. You can furnish average temperature figures to the reluctant students. The average students can figure their own average temperatures from the daily high and low readings. The advanced students can actually plot the highs and lows with one color line and the average temperatures with another. In this way, they can see not only the average temperatures, but the daily temperature span as well. The finished graph might look something like this:



Another type of graph that may be used to summarize climatic date is a combination bar and line graph. This graph shows average monthly temperatures and monthly rainfall. You might be able to use this with your average and advanced students.

(See next page)



Reading about the Restless Earth and Learning to Live with Nature (pp. 40-43). Stories about violent and dramatic changes in nature are fascinating to most young people. You may find that your students are not only willing but anxious to talk about this aspect of nature. The material on pp. 40-43 offers them an excellent opportunity to discuss in class the effects of natural forces on the every-day lives of people.

As your students read this section, encourage them to tell about personal experiences that they may have had during storms or ask them to relate things that their parents or friends may have experienced. Remind them of movies or television programs that may have shown how people are affected by physical changes in the environment or how they have attempted to control them.

To supplement the pictures in the textbook, a collection of pictures from magazines might be displayed on the bulletin board. Some of your students might like to look for pertinent newspaper items that could be read to the class. Other students might like to do some research on relief measures that are provided by the local or federal government for communities damaged by storms, floods, or fire. Encourage each member of the class to contribute something to the discussion.

SUGGESTED ANSWERS FOR "THIS LIVING EARTH"

"Checking Up," p. 36.

1. Five ways a farmer must work with nature in order to produce crops are: break up the soil, plant the seeds, make sure enough water is provided, keep the ground cultivated, and harvest the crop.
2. Workers other than farmers who depend on the earth are: fishermen, lumbermen, miners, hunters, trappers, ranchers, and indirectly, factory workers, merchants, transportation workers, and many others. In fact, almost every worker, directly or indirectly, earns his living from the earth.
3. This question pertains to your local community, and answers will vary accordingly.

"Checking Up," p. 40.

1. Climate is the one part of the natural environment that is most difficult to control and change. Many times, it determines other parts of the environment. In most instances, people have to lessen the hardships of an unfavorable climate or take advantage of a favorable one.
2. Climate is weather history because it is the story of weather over 10 or more years for a particular place.
3. The six facts that need to be taken into consideration in determining the climate of a place are: average temperature, precipitation, humidity, frost-free period, winds, and sunshine.

"Checking Up," p. 41.

1. An earthquake is caused by the movement of two or more rock layers under the surface of the earth. When a volcano erupts, loud rumblings may be heard, and columns of smoke, steam, and hot gases may pour out of a hole. As the hole grows larger, violent explosions may shake the ground and red-hot rocks and fine ash may fly high in the air. Sometimes lava or hot, melted rock slowly pours down the sides of the volcano.
2. Hurricanes are destructive because high winds and heavy rains pass across large land areas. The winds push water from the sea inland and smash houses and flatten crops and trees. The heavy rains cause floods. Tornadoes are called twisters because they have a "twisting" funnel of whirling air which spirals slowly upward.

"Checking Up," p. 43.

1. The four forces of nature that man is learning to control are floods, soil erosion, forest destruction, and drought.
2. This question is best answered by observing how your local community is controlling floods, soil erosion, forest destruction, and drought.

BRIEF EVALUATION EXERCISES

Directions: Unscramble the letters to form a word that you have studied. When you have discovered the word, write a definition explaining what the word means.

1. preatmerteu (temperature)	The measure of the hotness or coolness of the atmosphere.
2. heawter (weather)	The temporary condition of the atmosphere.
3. atmicel (climate)	The history of the weather over a long period of time.
4. tatpcerpiiion (precipitation)	Water vapor coming from the air in some form.
5. mudtiihy (humidity)	The water vapor in the air.

To see whether your students can associate the basic needs of man with actual examples.

Directions: Tell which of man's basic needs (food, shelter, clothing, government, religion, education, recreation, or community life) is being satisfied by each of the items below:

stone church	(religion)	ear muffs	(clothing)
tribal dance	(recreation)	school books	(education)
igloo	(shelter)	village	(community life)
town meeting	(government)	fried rice	(food)
fur coat	(clothing)	sod hut	(shelter)
television show	(recreation)	tribal chief	(government)
hot rolls	(food)	wooden god	(religion)
king	(government)	witch doctor	(religion)

To see whether your students can read and interpret "Climate Facts."

(Note: The chart of "Climate Facts" for Cleveland, Ohio, appears on p. 37 of the textbook in the first printing, on p. 39 in subsequent printings.)

Directions: Look at the "Climate Facts" chart for Cleveland on p. 37 and fill in the blank spaces in each of the following statements.

1. In the summer, you can say that the average temperature in Cleveland will be (72°), but on some days, it could go as high as (100°).
2. Cleveland gets more precipitation in (Jan.) than it does in (July). Its total for the year averages (34").
3. In January, the average temperature in Cleveland is (28°), but sometimes the thermometer may drop to (-17°).

4. If Hometown, U.S.A., had 80% humidity in July with temperatures the same as those in Cleveland, it would be more comfortable living in (Cleveland).

5. Farmers and gardners around Cleveland must plant crops that grow to maturity in (175) days or else the crops may be killed by the (frost).

To check understanding of forces of nature that change the earth quickly and forces that man has been able to control to some extent.

Directions: Match each word in Column I with the appropriate meaning in Column II. Use numbers and letters only, when you answer. Each item in Column II may be used only once.

√

	Column I			Column II
1.	Tornado	(c)	a.	a period with little or no rainfall
2.	Hurricane	(b)	b.	a large storm with high winds and heavy rains
3.	Conservation	(f)	c.	a storm with a spiraling funnel, sometimes called a "twister"
4.	Drought	(a)	d.	the movement of two or more layers of rock under the earth's surface
5.	Erosion	(e)	e.	the wearing away of the land by forces of nature
6.	Earthquake	(d)	f.	the wise use of natural resources

STUDENT READING LIST FOR "THIS LIVING EARTH"

(The starring system, described in Booklet #1, is used here to indicate easy, average, and advanced readings.)

Non-fiction

*** Berke, J. & Wilson, V., Watch Out for the Weather, Viking, 1951. Little known facts or scarcely realized influences of climate on our daily lives, health, attitudes, and homes make fascinating reading.

*** Bethus, R., Perhaps I'll Be A Farmer, Aladdin, 1950. Crops and soil, animals and equipment form a part of this complete account of life on the American farm.

* Curtis, M., Conservation In America, Lyons & Carnahan, 1947. A very complete account of conservation and some of the results from careless use of the land, water, wild life, and forests. Photographic reproductions are extremely realistic.

** Dersal, W., & Graham, E., The Land Renewed, Oxford, 1946. In farming, soil is a valuable resource and must be conserved. Each person can do his part.

* Fenton, C. & M., The Land We Live On, Doubleday, 1944. Conservation is the main theme of this book that explains terms such as land, Great Plains, prairies, valleys, buttes, and glaciers.

* Fenton, C. & M., Our Changing Weather, Doubleday, 1954. Cyclones, thunderstorms, fog, haze, rain, and air masses, all play their roles in the weather story.

** Fenton, C. & M., Riches from the Earth, Day, 1953. A story of the mineral riches of the earth and some of their uses.

** Floherty, J., High Wide and Deep, Lippincott, 1952. Men of the Coast and Geodetic Survey combine science and adventure as they measure the surface of the earth, earthquakes, tides, and erosion.

** Howard, R., The Real Book About Farms, Watts, 1952. Teamwork on a farm is a necessity whether in the United States, France, or China.

*** Greenhood, D., Down to Earth, Holiday, 1951. Fascinating facts, anecdotes, thumbnails, biographies, short cuts, and helps in using maps are contained in this account of cartography.

* Reed, M., The Sky Is Blue, Harcourt, 1940. The surface of the earth is never stationary. Mountains grow, soil moves, volcanoes erupt, and the earth shakes as the forces of nature carry on.

** Schneider, H., Everyday Weather and How It Works, Whittlesey, 1951. Each day brings a new problem to the meteorologist. With his instruments and knowledge of science, he tries to predict the weather.

* Schneider, H., Follow the Sunset, Doubleday, 1952. This is a clear presentation of longitude and time.

** Smith, F., The First Book of Conservation, Watts, 1954. Wild life, forests, and soil must be used wisely by everyone.

** Spelhaus, A., Weathercraft, Viking, 1953. A handbook for the amateur meteorologist, this book contains instructions for making and using simple weather instruments as well as keeping and using weather records.

* Tannehill, I., All About the Weather, Random House, 1953. The full story of weather is told in an easy-to-understand manner. Weather prediction is vital to many people and industries in the United States.

*** Tazieff, H., Craters of Fire, Harper, 1952. Pictures and first-hand accounts tell the story of the birth and growth of volcanoes, hot springs, and geysers.

SELECTED AUDIO-VISUAL AIDS FOR "THIS LIVING EARTH"

How Volcanoes Make Mountains, 1949 (mp. b&w, sound, 10 min., #42). Active volcanoes and other evidence of volcanic action are shown. The world's volcano belt is described.

Industry Changes America, 1955 (fs. color, 44 fr, #48). How inventions, individual enterprise, and transportation created big business and changed the United States into a nation of cities.

Look to the Land, 1954 (mp, color, sound, 21 min., #23). Shows the wealth of natural resources in the United States and how we have wasted and misused them. Conservation methods that are needed are discussed and shown.

Meaning of Conservation, 1954 (mp, color and b&w, sound, 11 min., #20). Summarizes the history of the use of our natural resources and the need for conservation. It shows what is being done to maintain our hunting and fishing, water bodies, trees, and soil.

Our Earth, 1937 (mp, b&w, sound, 11 min., #23). A survey of the physical aspects of our earth in their relationships to concentrations and activities of people. Climate, water bodies, mountains, plateaus are discussed.

Violent Forces of Nature, 1954 (fs, color, 23 fr, #24). Illustrates the destructive force of earthquakes, volcanoes, floods, drought, tornadoes, and hurricanes.

Wearing Away of the Land, 1944 (mp. b&w, sound, 11 min., #23). The processes of degradation are constantly at work. Evidences of this work are viewed on a world-wide scale.

The Weather, 1952 (set of 8 fs, color, #21).

"Sun, Weather Maker"
"Air in Action"
"Water in Weather"
"Thunderstorms"
"Weather and People"
"Weather Bureau"
"Weather Maps"
"Be Your Own Weather Man"

The Weather, 1942 (mp, b&w, sound, 11 min., #23). Explains the front, weather instruments, cloud formations, and methods of predicting the weather.

Weather and Climate, 1951 (fs, b&w, 51 fr, #52). Depicts basic factors in weather: temperature, wind, water vapor, atmospheric pressure, and types of weather with frontal action. Climate is described with some of its controls.

LET'S LOOK AT MAPS (pp. 44-56).

Maps are instruments that help the geographer take a closer look at various elements of environment. By the use of maps, many details can be assembled quickly and used simultaneously. Today, maps are used in all walks of life -- they are found in newspapers and magazines, in the movies, and on television programs. The ability to read maps accurately is almost as important as the ability to read words.

Maps will help you make many points and draw many comparisons for your class. Your students" ability to use maps quickly and accurately will contribute much to their understanding of geography and THE WORLD AROUND US. Map skills must be used constantly if they are to be retained. These skills are valuable for your students not only in geography class and other classes, but outside the classroom as well. And they will be even more valuable in your students' adult lives.

The material in "Let's Look at Maps" will help you to lay the foundation for these skills. If your students come to you with little experience in the use of maps, you may want to spend more time in teaching this aspect of geography. Time devoted here will not be wasted, as your class will be better equipped to handle the task that lies ahead. On the other hand, your new class may have had a great deal of experience in the use of maps. If this is the case, you may wish to spend less time on this section and use it primarily as a review.

In either case, this section is a valuable starting point for the map program which is developed gradually in each succeeding chapter of the book. Earlier skills are constantly reviewed and new ones are introduced as your students begin the study of each new chapter.

To help you teach map skills to your students, the introductory map section of THE WORLD AROUND US is divided into several parts.

1. "Understanding Map Symbols," pp. 44-47, shows the relationship between map symbols and the real features of the earth.
2. "Reading the Map Legend," pp. 47-51, discusses the use of hatching, shading, and color on maps.
3. "Distance, Direction, and Location," pp. 51-56, explains the meaning of scale and direction and the use of the grid in locating places by the parallels of latitude and the meridians of longitude.

AROUSING INTEREST IN MAPS

Children are curious by nature. This curiosity is very evident when something new is introduced. You might try to arouse your students' interest by using map material they may not have seen or heard about. Here are some suggestions:

1. Show the class a collection of old maps. Several sets of old map reproductions can be bought in art stores and elsewhere at reasonable prices. These reproductions are made for framing, but they can be used in the classroom as well. As the class looks at the old maps, you can start a discussion by asking who might have used the maps. This could lead into a discussion of explorers, sailors, pirates, and buried treasure. The questioning could then shift to why a map was necessary. Why do we need maps today? Your students will probably be able to make a long list of uses for maps today.

2. Show your class some unusual maps. Silk maps, for example, can be obtained from a war surplus store. You might explain that fliers in World War II and in the Korean War carried these maps with them when they flew their missions. The maps were made of silk to withstand water damage and so that they could be folded into a very small bundle.

Aeronautical charts for your local community can be obtained from the Civil Aeronautics Administration in your vicinity or in Washington, D. C., for about 25¢ per copy. Most students are interested in the complicated radio range symbols and other interesting features of these maps. The same is true with the topographic maps published by the Coast and Geodetic Survey and available through many stationery stores.

The United States Army used many unusual map training devices. Perhaps the father of one of your students still has a map of the human hand called "Handland." Any novelty such as these may arouse a great deal of interest in maps. Class discussion can then lead into the question, "Why are maps necessary?" Your students can make a list of the uses of maps on the board.

3. Still another way to secure interest for your study of maps is to read or tell an amusing story connected with maps. (For example, a story by C. Lester Walker appeared in an article called "Map the World" in the February, 1953 issue of Harper's Magazine.) After you have told the story, you might lead your class into a discussion about maps and why they are important.

4. Several of the filmstrips listed on p. 24 of this booklet show how people today use maps to find out about their environment. One of these filmstrips could be shown to your class so that they can discover what some of the uses of maps are.

MAP SKILLS

The main purpose of pp. 44-56 is to introduce or review, as the case may be, the map skills necessary to begin using the maps in THE WORLD AROUND US. This section introduces only the most basic skills. In the "Let's Look at Maps" sections of future chapters, your students will have an opportunity to review, practice, and develop these skills. New skills will be introduced from time to time. The map studies constitute a growing and gradually expanding type of learning.

The following list points out the specific map skills that are being presented in this introductory section. In succeeding portions of the manual you will find similar lists for each map study in the book.

Skill	Application
Symbols	Land, water, coastline, continent, island, lakes, shoreline, rivers, boundary lines, cities, capital cities, mountains.
Legend	Title, hatching, shading, shading to show rainfall, shading to show population, color, color to show elevation, color to show political divisions, color to show climate.
Distance	Difference in scale, scale of miles.
Direction	N, E, S, W, NE, SE, SW, NW; use of grid to find directions.
Location	North Pole, South Pole, Equator, Northern Hemisphere, Southern Hemisphere, latitude, parallels, North and South Tropics (Tropics of Cancer and Capricorn), Arctic and Antarctic Circles, high latitudes, middle latitudes, low latitudes, longitude, Prime Meridian, Eastern Hemisphere, Western Hemissphere, latitude plus longitude to find location.

SUGGESTIONS FOR TEACHING MAP SKILLS

As your class begins its study of maps, it might help if you could secure some wall maps, a globe, atlases, a map symbols chart, and any other teaching aid. Then, as your students read this chapter, they will have an opportunity to work not only with the maps in THE WORLD AROUND US but with other maps as well.

Before your students begin to study pp. 44-56 in their textbooks, you might like to develop the meaning, advantages, and disadvantages of maps and globes. This allows you the opportunity to present evidence and have your class draw its own conclusions.

At the outset of the lesson, your class might develop definitions of a map and a globe. A map is a drawing of the earth or a part of it on a flat surface. A globe is a miniature or model of the earth. Some of the boys in your class have probably made model planes, cars, or boats, and will be able to explain that a scale model is like the real object, only smaller. Once these two definitions have been established, you might follow the line of questioning suggested in the chart below. As you give the demonstration for each question and provide your class with the necessary background information, see whether they are able to form conclusions, keeping their definitions and the new data in mind.

Questions or Directions	Demonstration	Conclusions
1. Compare the size of Greenland and S. America on a wall map. Compare their sizes on a globe. Is the comparison the same on the map? Are they different? Which is correct?	On many wall maps, Greenland appears almost as large as S. America. (Try to choose one that demonstrates this.) Point out Greenland and S. America on both the wall map and the globe.	Globes give the true size because they are models of the earth. Some maps give the wrong size.
2. Compare the shape of Australia on a map and on a globe. Are they the same? Are they different? Which is correct?	Many times, Australia is out of shape on certain wall maps especially on the hemolographic projection. (Try to choose one where it is.) Point out Australia on both map and globe.	Globes give true shape because they are models of the earth. Some maps give the wrong shape.
3. Draw a straight line on the wall map from New York City to London. Use a string to draw a straight line on the globe between the two cities. Are they the same? Which is correct?	Use chalk and a yard stick to draw the line on the wall map. Use chalk to transfer the line from the globe to the map. Note that this line passes over Newfoundland.	Globes give the true distance and direction because they are models of the earth. Some maps give the wrong distance and direction.

By this time your students are probably wondering why it is necessary to have maps at all if the globe is sometimes more accurate. This may give you an opportunity to start a short class discussion on the point. However, you might add that maps, too, are very important. To prove this, ask the class to think carefully about the following questions:

Questions and Directions	Demonstration	Conclusions
1. Go to the globe and find Baltimore (or another city that is not a capital). Now find the same city on a map of the United States. Which showed it best?	On many globes, only capital cities are named. By using a United States map, your students should be able to find the city more easily.	Maps can show more detail than globes.
2. Suppose you were going to take a trip by car, which would you take with you - a map or a globe?	Pick up the globe and show how awkward it would be to take the globe with you. Then, fold up a road map and carry it with you.	Globes are big and bulky. Maps can be folded and are easier to handle.
3. When we looked through our textbook the other day, how many people saw a globe in it?	Some may say that they did. Have them locate the globe. Ask whether it fits the definition of a globe or a map.	Maps can be printed in books.
4. Can anyone in the class hang this globe on the wall? How about the map?	Any volunteer will find it difficult to hang the globe on the wall, but the wall map proves an easy task.	Maps can be hung on the wall for easy viewing.
5. How much of the earth can you see at any one time on the globe? On a map of the world?	Show that only half of the globe is visible to the class at any one time. On a map of the world, they can see the whole world.	You can only see half of the globe at one time. On maps of the world, you can see all of the world at once.
6. How much do you think a globe costs? How much do you think this road map costs?	Your students can guess. A good globe costs between $35 and $50. The road map is free.	Globes are more expensive than maps.

In concluding your lesson, you should point out that both maps and globes are important and have to be used together. Each has its advantages and disadvantages. It is often necessary to check information on both the map and the globe.

Understanding Map Symbols (pp. 44-47). The pictures and maps on pp. 44-47 show the actual features of the earth and the symbols that are used on maps to show these features. As your class reads this section, they should use these visual aids frequently. You may supplement this material by using wall maps and a wall chart of map symbols.

You will probably want your reluctant students to stick very closely to the textbook material. This group could draw the symbols on a sheet of paper or keep a symbols chart in their notebooks. Check to see whether members of this group can transfer their learning from the maps in the textook to other maps that may use slightly different symbols for showing the same things.

The average students can do extensive work on finding and using the symbols on other maps. This group could construct their own symbols chart. Searching through magazines and newspapers for pictures of features of the landscape, they can make a collection of features that are represented symbolically on maps. These pictures may be pasted on pieces of cardboard and used in flash card drills, having students draw the appropriate symbols on the board. A large poster could also be constructed showing various features of the landscape with the corresponding map symbols beside them.

The advanced students will be able to find symbols that are unusual or new. They may use these in much the same manner as the average group. This group may find it interesting to see how many different ways a certain feature of the landscape can be represented on different maps. For example, mountains can be shown by shading, color, hatched lines, and other symbols. This group could construct a chart showing all the different ways of showing the same feature.

Reading the Map Legend (pp. 47-51). In talking about the legend and in discussing special symbols and colors on maps, many teachers find it helpful to have their classes actually practice some of the skills introduced in the reading. Once your class has read pp. 47-51, paying particular attention to the map showing a special area by hatching on p. 48, the map showing rainfall by shading on p. 48, the map showing population by shading on p. 49, and the elevation chart on p. 49, you might want to try some practice on the use of these new symbols. The sample questions below use the maps on pp. 414-423 in the textbook to give practice in the use of the legend. Questions appropriate for reluctant, average, and advanced students are indicated by the starring system, and answers are provided.

Pages 414-415. *What is the title of this map? (World Rainfall Map). *How much rainfall does the darkest color stand for? the lightest? (Over 80", under 10"). *How much rainfall does the (point out) southeastern part of the United States receive? (40" - 80"). Central Australia? (under 10"). East coast of Australia? (40" - 80"). **How much rainfall does the island of Japan receive? (40" - 80").

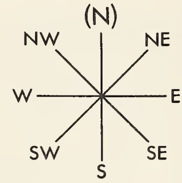
Pages 416-417. *What is the title of this map? (World Population Map). *What does the darkest color stand for? the lightest? (over 250 people per square mile, less than 2 people per square mile). *What is the population density of Japan (point out)? (over 250). *What is the population density of central Australia? (less than 2). **What part of the United States has the densest population? (the northeast). the sparsest? (the west). ***By using this map and the one on p. 439, find out which countries in Asia have a very dense population? (China, Japan, South Korea, East Pakistan, Republic of India, Java). ***Is there any relationship between the rainfall and the population in these countries? (People live where there is plenty of rainfall).

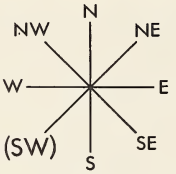
Pages 418-419. *What is the title of this map? (World Elevation Map). *How does this map show elevations? (different colors). *Which continent has the largest area of high land? (Asia). **Is there any part of the United States that is below sea level? (Yes, two places in the southwest). **How high is the highest land in the United States? (10,000' to 15,000'). ***In which direction does one river that is shown in Australia flow? (toward the sea, or to the southwest). ***By comparing this map with the one on p. 417, can you determine whether many people live in the high lands in Asia? (this area is sparsely populated).

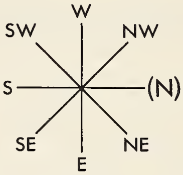
Pages 422-423. *What is the title of this map? (World Climate Map). *What method does it use to show climates? (colors). *What type of climate is in central Australia? (tropical dry lands). *What type of climate has Japan? (moist semitropical). *What type of climate exists around the edge of Greenland? (northern treeless). **Name the climate in your community. ***Check the rainfall map on pages 414-415 to determine the rainfall in northern Africa. What type of climate exists in this part of Africa? Is there any connection between the rainfall and climate? (under 10", tropical dry lands, the lack of rainfall causes the land to be dry and thus affects the climate).

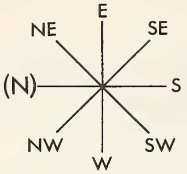
Distance, Direction, and Location (pp. 51-56). Students are frequently confused by differences in maps of various scales. By using the pictures on p. 51, you can show, in a familiar context, how the principle of scale operates. You will want to point out that the close-up photograph, while it shows more detail, covers less area. Once your students understand how this principle works in photographs, they will have less difficulty with the use of different scales in maps, such as those on p. 52.

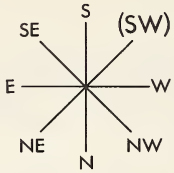
In working with direction, you will find it worthwhile to review the cardinal and in-between directions. If your students remember the rule that south is opposite of north and that when facing north, east is always on the right-hand side, they will have little difficulty keeping their directions straight. To give your students practice in reviewing directions, you might use a drawing of the points of a compass, with all the points left blank except one. Your students can fill in the missing directions.

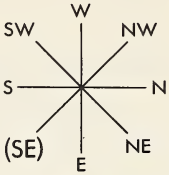












Latitude and longitude are difficult concepts for teen-age students. Successful learning will result if you help them to understand the principles involved and guide them in following each step. Once a student becomes lost, it is hard to correct the misconceptions. Sometimes it is better to go back to the beginning and develop the whole concept all over again.

After your students have read the material on pp. 51-56 and are familiar with the words and their meanings, you might want to demonstrate some of the difficult concepts immediately.

You can use a cartograph globe if you have one handy, but a regular globe will do almost as well. Ask someone in the class to locate the North Pole and the South Pole. What name is given to the imaginary line that is drawn around the earth just half way between the poles? When your students answer with the word "equator", you can draw the equator on the globe with chalk. Then you might say to your class, "Every place in the world is either north of that line, south of that line, or directly on that line. The secret is to know just how far north or how far south places are from the equator. We call this distance latitude. Map makers have helped us to find out how far places are from the equator by drawing lines on maps and globes. Many map makers draw a line 10° north of the equator and one 10° south of the equator. If you were standing on this line, you would know that you were 10°, or about 700 miles, from the equator since each degree of latitude stands for about 70 miles on the earth." By spinning the globe and holding the chalk in one spot, you will be able to draw chalk circles around the globe every 10°.

You might ask your students what is unusual about the lines that you have just drawn on the globe. They might answer that they are all circles, with the equator being the largest, or that they are all parallel. Since the lines follow the same course and are an equal distance apart, they are called parallels. These parallels measure degrees of latitude. At this point, you may have members of the class find the latitude for some cities that happen to be located on the same parallel. Cairo, Egypt, and Durban, South Africa, make excellent examples because both are near the 30° parallel, yet one is north of the equator and the other is south. Your students will begin to see that directions are as important as numbers in latitude readings. After enough practice has been given so that each student can read latitude correctly, your class is ready to tackle the next step.

You might ask the class to pretend for a minute that they are on a sinking ship. How would they send for help? (S.O.S., radio, flares). Now pose this problem: "Suppose your boat's position is on the 30°N parallel. As you know, the 30°N parallel encircles the earth and the boat could be anywhere on that line. How would your rescuers know where to go?" The class will now realize that something else is needed to complete the location scheme.

At this time, you might take the chalk and draw a line from the North Pole to the South Pole through Greenwhich, England. Explain that this starting point was arrived at through international agreement. Every place in the world is either to the east, to the west, or directly on that line. Again you might mention that map makers have helped us find out how far to the east or how far to the west we are by drawing and numbering other lines. Draw some of them on your globe and point out that these lines all meet at the North Pole and at the South Pole. These lines are called meridians.

Here again, you may find it helpful to give the class an opportunity to try some locations using only meridians. (Examples: Alexandria, Egypt, 30°E, and New Orleans, U.S.A., 90°W.) They should note again that a direction is necessary after the longitude reading.

Once the two operations have been mastered separately, the class can then proceed to use both latitude and longitude to locate places. With reluctant students, it is best to limit your locations to places that are directly on parallels and meridians. With your average students, you may want to have them try some interpolation between the lines. The advanced students might be interested in learning about the division of degrees into minutes and seconds.

Making Map Stencils. Sometimes you may wish to use outline maps. If you are unable to purchase them for your class, you can easily cut your own mimeograph stencils. The first step in the process is to locate the map you wish to copy for your students' use. The maps in the "Review and Reference" section of The World Around Us as well as the more detailed maps near the beginning of each chaptor may answer your purpose.

First, trace the map on a sheet of typing paper. This paper is thin enough to allow tracing but thick enough to have the strength needed. With a soft lead pencil, darken in the outlines, especially the ones that you want to stand out. When you are satisfied with your job of producing the master copy, you can begin to put it on a stencil.

Most mimeograph stencils have a piece of black backing paper that comes with them. Throw this away. Put your master copy between the stencil and the thicker backing paper so that you can see the map through the stencil. Paper clips will hold the sheets together and keep the master copy from slipping. Then by using a ball-pointed or wire stylus (a dry ball point pen may also be used), trace the map onto the stencil. As you trace, the stencil will stick to the pencil outlines on your master map, and you will be able to see just what you have done. When the stencil is completed, remove the master map. You should be able to hold the stencil up to the light and see very clearly where you have drawn each line. If these lines are not clear cut, go over them until they are.

In many schools, teachers have direct access to the mimeograph machine and can reproduce work whenever it is convenient. In other schools, the office personnel runs the mimeograph equipment and arrangements must be made to have the stencils run off well in advance of the map's scheduled use.

Exercise on the Use of Latitude and Longitude. You can make up an interesting exercise to give your students practice in the use of latitude and longitude. You will need to reproduce the Mercator plotting sheet shown on the following page. The plotting sheet can be reproduced by mimeograph or other reproduction means on sheets of 8½ x 11 paper. The parallels and meridians should almost fill the page.

By having your students find the latitudes and longitudes in the order given below and by having them conneet each location with a straight line, they can draw a rough outline of the continent of South America.

1. 8° N - 77° W
2. 11° N - 75° W
3. 12° N - 72° W
4. 10° N - 65° W
5. 9° N - 60° W
6. 6° N - 55° W
7. 2° N - 50° W
8. 0° - 50° W
9. 2° S - 45° W
10. 2° S - 40° W
11. 5° S - 35° W
12. 8° S - 35° W
13. 13° S - 39° W
14. 20° S - 40° W
15. 23° S - 45° W
16. 30° S - 50° W
17. 35° S - 55° W
18. 34° S - 58° W
19. 36° S - 57° W
20. 38° S - 57° W
21. 39° S - 62° W
22. 41° S - 62° W
23. 41° S - 65° W
24. 48° S - 65° W
25. 53° S - 68° W
26. 55° S - 65° W
27. 55° S - 70° W
28. 50° S - 73° W
29. 40° S - 73° W
30. 20° S - 70° W
31. 15° S - 75° W
32. 5° S - 81° W
33. 0° - 80° W
34. 5° N - 77° W

Projects for Map Work. Reluctant students can be given the project of finding true directions in the classroom. If it is possible, ask them to paint a large compass rose on the floor. They can determine true north by observing the shadow cast on the floor by some vertical object directly at noon (sun time). The other directions can then be determined by using true north as the starting point.

These students may be interested in making compasses by magnetizing needles with a permanent magnet. The magnetized needles can be made to work as compasses if they are stuck through small pieces of cork and floated on water.

The average and advanced students might be interested in drawing a map of the classroom. Some of the students can measure the length and width of the room. Others can measure the windows and doors. They can use the scale of 1 foot in the classroom equalling ½ inch on the map. Symbols may be used to show steampipes, radiators, desks, lockers, filing cabinets, and other articles of furniture.

It is easier if all measurements are kept to even half feet. The map should have a legend, a scale of miles, an arrow indicating where North is, and no measurement numbers other then those in the scale of miles. This separates it from a floor plan.

SUGGESTED ANSWERS FOR "LET'S LOOK AT MAPS"

"Checking Up", p. 47

1. One way to show the difference between land and water areas on a map is by using different colors. In this text, the land areas are green and the water areas are white. The symbol for a river is a line that shows the course of the actual river.

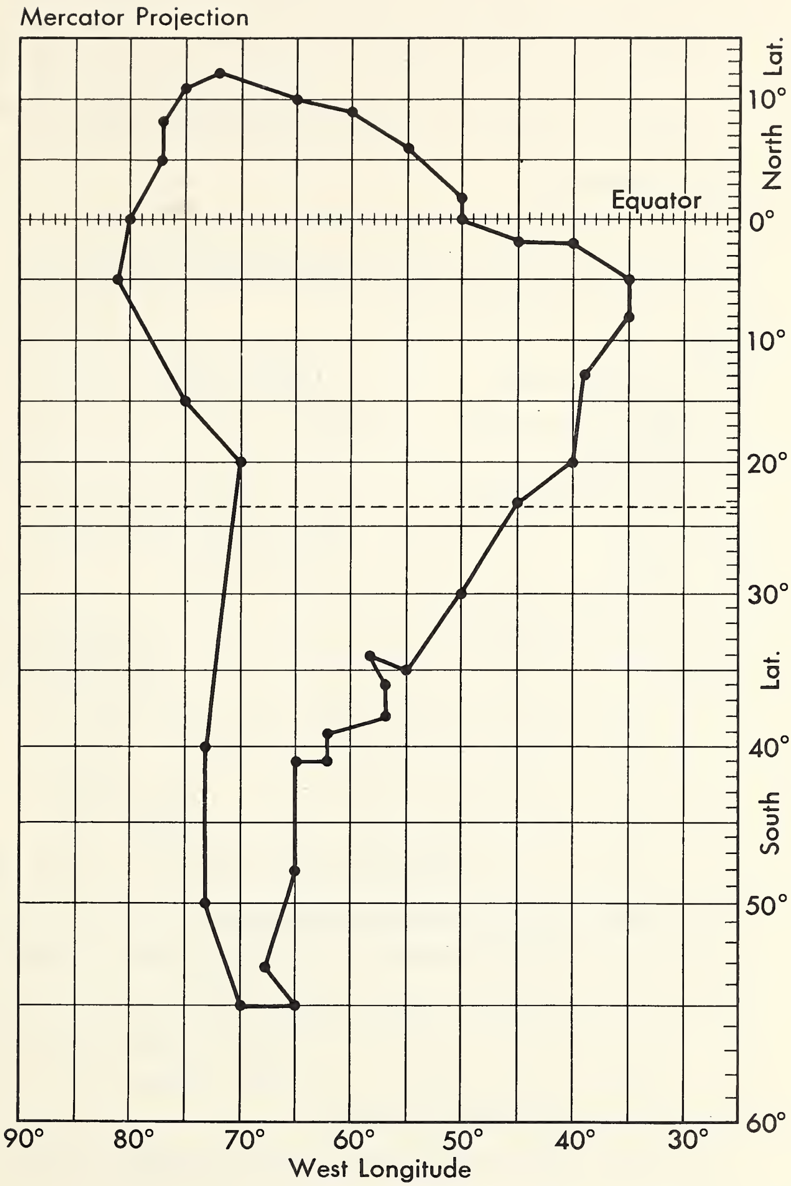
2. A political map is a map emphasizing boundary lines and other man-made features on the earth. One way of showing boundary lines on a map is by using a combination of dots and dashes to form lines.

3. A dot on the map usually stands for a city. A capital city is indicated by a small circle with a star in the center.

"Checking Up", p. 51

1. The map legend is usually a boxed-in area on the map that explains the special symbols used on the map. We should always read the legend before looking at the map itself because we must know what the special symbols mean in order to understand the map.

2. On some maps a series of fine lines drawn close together, called hatching, shows special areas. Shading and different colors can also be used to show various areas.


Mercator Projection
Equator
North Lat.
South Lat.
10°
0°
10°
20°
30°
40°
50°
60°
90°
80°
70°
60°
50°
40°
30°
West Longitude

3. Altitude or elevation can both be used to mean the height of land above sea level.

"Checking Up", p. 56

1. The scale of miles is given to help us measure the distance between places.

2. Grid lines are the parallels and meridians on a map or a globe. The parallels are the east-west lines and the meridians are the north-south lines.

3. Latitude means distance north or south of the equator measured in degrees. Longitude is distance east or west of the prime meridian measured in degrees.

EVALUATION EXERCISES

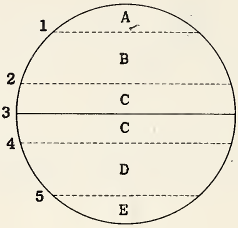
To check on understanding of the various parallels

Directions: Name all the lines that are numbered. Tell whether the lettered areas are in the low, high, or middle latitude. Advanced students may give the latitude reading for each line.

Answers

1. Arctic Circle, 66½°N
2. North Tropic
   (Tropic of Cancer) 23½°N
3. Equator, 0°
4. South Tropic
   (Tropic of Capricorn) 23½°S
5. Antarctic Circle, 66½°S

A & E - High
B & D - Middle
C - Low



To check on various map skills

Directions: Use the maps on pp. 442-443 of the textbook to answer the questions.

1. What symbol shows international boundaries? (dot and dash line)

2. What city is located at 33°N - 20°E? (Bengasi, Lybia)

3. What does the star symbol mean? (capital city)

4. What type of climate does Egypt have? (tropical dry lands)

5. Which direction does the Nile River flow? (northward)

6. What kind of map is the one on p. 443? (political)

7. What is the latitude and longitude of Cairo, Egypt? (30-31°N - 30-32°E)

8. How far is it from Bengasi to Cairo? (650-700 miles)

9. In what direction would you go to get from Bengasi to Tripoli? (west)

10. Is Bengasi in the high, middle, or low latitudes? (middle)

To check on the understanding of vocabulary

Directions: Complete each statement by choosing the answer which best completes the statement. Use numbers and letters for your answers.

1. A map is better than a globe because

   A. maps are more accurate
   B. maps cost more
   * C. maps are easy to handle
   D. maps are easy to read

2. Latitude is

A. a line running north and south
*B. distance from the equator
C. a line running east and west
D. distance from the prime meridian

3. A parallel is

A. a line running north and south
B. distance from the equator
*C. a line running east and west
D. distance from the prime meridian

4. The Prime Meridian is the line that

*A runs through Greenwich, Egnland
B. is the 0° parallel
C. is the 180° meridian
D. is the International Date Line

5. When you face north

A. south is always on the left
*B. west is always on the left
C. east is always on the left
D. southwest is always on the right

6. Maps and golbes are

A. always pretty colors
B. hard to buy
C. made so north is on top
*D. representations of the earth

7. Political maps show

A. rainfall
B. elevations
*C. boundaries
D. population

8. A map legend gives

A. the title
B. scale of miles
C. symbol meaning
*D. all of these

SELECTED AUDIO-VISUAL AIDS FOR "LET'S LOOK AT MAPS"

Airplane Changes Our World Map, 1942 (mp, b&w, sound, 11 min, #23). Describes the evolution of the world map and shows some of the problems involved in picturing the earth. The influence of the airplane has changed our concept of distances and mapping.

Exploring Through Maps, 1943 (set of 4 fs, color and b&w, #53).

"maps and Their Meaning" - 53 fr.

"We Live on a Huge Ball" - 52 fr.

"Flat Maps of a Round World" - 56 fr.

"Maps and Men" - 44 fr.

Maps and Their Uses, 1950 (mp, b&w, sound, 10 min, #20). An introduction to the study of symbols on maps and the idea that there are different maps to do different jobs.

Map Symbols, Dots and Lines, 1954 (fs, color, 60 fr, #58). Maps and photographs illustrate the meaning of symbols, dots, and lines that are used on maps.

Maps, Globes and Graphs, 1954 (fs, color, 24 fr, #24). Explains the purpose of maps and graphs, Discusses different types and allows for their uses.

Maps and Their Meaning, 1950 (mp, color, sound, 14½ min, #2). The use of color on maps is shown together with photographs of the actual land surfaces. The film shows the effects of altitude, latitude, and rainfall on the way man uses the land.

Our Big Round World, 1954 (mp, b&w, color, sound, 10 min, #20). A visual basis for understanding that the earth's relation to the sun accounts for day and night, the seasons and climate. The film indicates the climatic regions of the earth.

Understanding a Map, 1952 (mp, b&w, sound, 10 min, #69). The mapping of a small town and larger areas shows the use of scale as well as different types of maps.

Using Maps and Globes, 1954 (fs, color, 48 fr, #58). An explanation of scale of miles, distance, direction, and relief features as they are shown on physical-political maps and globes.

BOOKLET #3

Your Own Look Ahead 1
Ch. 1: Around the Amazon . 3
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YOUR OWN LOOK AHEAD INTO UNIT ONE

Many of the so-called backward people of the world are really not as backward as they seem. The unit on the tropical rainforests of the world provides you with an opportunity to demonstrate this to your class. To do this successfully, you will need to teach your students not only how these people live but also why they live as they do. In this unit, you will be able to show that customs and ways of living in the rainforest are conditioned to a large extent by natural environment. Once this interrelationship between man and environment is pointed out, your students will be better able to understand the rainforest people and realize that they make valuable contributions to the rest of the world.

There are many important ideas in this unit. You can guide your students in their search for the most significant ideas by asking questions. The following diagram lists some Major Questions that pertain to the chapters in this unit. Each question is related to one of the six Primary Objectives that were stated in Booklet #1. The accompanying generalizations do not answer the specific chapter questions directly, but rather provide a general answer that applies to rainforests wherever they are found in the world. The detailed answers to the Major Questions are given later in this booklet in the various chapters to which they apply.

PRIMARY OBJECTIVES AND GENERALIZATIONS

Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.

Generalization: The people of the world's tropical rainforests have adapted their ways of living to the heat, humidity, rain, and dense forests.

MAJOR QUESTIONS

Chapter 1, Question #1

How has man's way of living in the American rainforest been controlled by the natural environment?

Chapter 2, Question #1

In what ways do the people of the African rainforest live similarly to the people in Amazonia?

Chapter 2, Question #2

How have changes in environment brought about changes in the way people live?

Chapter 3, Question #1

In what ways have the people of the Asian rainforest learned to change and control many things in their environment?

Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these people.

Generalization: In the rainforests are found or produced many valuable products needed by the United States and other industrial nations.

Chapter 1, Question #2

For what things do we depend upon the American rainforest?

Chapter 3, Question #2

In what ways does the world depend on the Asiatic rainforest? How are the people of the rainforest dependent on the rest of the world?

AROUSING INTEREST IN THE UNIT

Most students have heard or seen stories, real and fictional, about those areas of the world which we call "tropical rainforests." Such stories may already have aroused interest in these remote parts of the world. You will need to direct this interest into worthwhile activity and show your students that a study of the people of the rainforest has meaning for them.

Before guiding your class to the rainforest areas, you may want to familiarize yourself with the organization of this unit. On p. 57 there is a map showing where the rainforest areas of the world are. The unit introduction on pp. 57-58 describes the climatic conditions that are characteristic of all rainforest areas. (Each unit introduction in the book contains a map and description of the climatic region being discussed in the unit.) The chart of "Climate Facts" on p. 58 gives climatic data for a typical rainforest city. (Each unit introduction contains a similar chart.) Your students can compare these facts with the climate facts for their local community. You will find it helpful to pre-read pp. 57-90, keeping in mind the Major Questions for this unit and paying special attention to "Reviewing Unit One" on pp. 89-90. This review provides a "Broader View" of the rainforest people and their current problems. (Each unit ends with a "Broader View.")

To prepare your class for their reading of this unit, you might tell them that they are about to become world travelers. On their journey, they are going to meet many people who at first may seem to have strange customs and different ways of doing things. As your students become better acquainted with the world's peoples, they will see that customs and ways of living are frequently conditioned by the natural environment.

Encourage your students to ask questions. Most real travelers miss much of the meaning in what they see because they do not ask questions. What, why, how, where, and when are words that an observant traveler and reporter should constantly keep in mind.

To develop this questioning spirit, you can have your students examine the pictures on pp. 11-13 of the textbook and the pictures in Unit One. They might keep these questions in mind as they observe. (1) Where was each picture taken? (2) Who lives there? (3) How do the people make a living? (4) In what ways are the people in the various pictures the same? (5) How are they different? (6) How do the people affect us? (7) Is there any relationship between the way the people live and their natural environment?

At this time, your students need not give detailed answers. They should, however, notice that these pictures represent three areas -- South America, Africa, Asia; that different people live in these areas -- Indians, Negroes, and Orientals; that they are similar in many ways; and that the Asian people seem most different.

Perhaps you can surprise your class by announcing that each student in the room depends daily on people like those pictured. Your students will want to know how. You can explain that they will find out for themselves as they study the unit.

(You can make a similar approach by using a film, filmstrip, current event, adventure story, or your personal picture collection.)

Have your students look at the map on p. 57 to see the areas in which the pictures were taken. If you wish to show these areas in greater detail, you can use the map on pp. 422-423. Have the areas located also on a large wall map and a globe. The countries might be named by an ***advanced student. All of these places, even though they are in different sections of the world, have one thing in common, their climate.

Questions to introduce the reading material on pp. 57-58 might be, "What is similar about the location of each of these areas?" (They are on or near the equator.) "What does this mean?" (The climate is probably hot.) Have your class read to find the answers to these questions and to discover more about the climate.

As the class reads, they will have to recall some of the information on weather and climate that they studied earlier. With *reluctant students, it might be wise to review the meaning of climate, including temperature, humidity, and precipitation If climatic statistics are available for your local community, your class may enjoy comparing them with those listed in the chart of "Climate Facts" for Manaus, Brazil, on p. 58. (If local statistics are not available, your class might turn to p. 420 of the textbook and use the climate facts given there for the United States city nearest to where they live.)

When your lesson is completed, your class should have a general idea of what tropical rainforest climate is and where the rainforests are, a visual acquaintance with some of the people, and a hint that they depend on the people of the rainforest for something. You will now be able to carry your introduction into Chapter 1.

CHAPTER 1: AROUND THE AMAZON

YOUR OWN LOOK AHEAD INTO CHAPTER 1

Your first encounter with the tropical rainforests will take place in the Amazon basin of South America. Interest in this area has always been great since the time of early Spanish and Portuguese explorations. At first it was a search for gold and silver that led men up the steaming Amazon Valley. Later, the discovery of rubber in Brazil focused renewed attention on the area. Although the rubber trees were carefully guarded, many were smuggled out of Brazil and planted in other areas of the world. But when the supply of rubber from the Far East was shut off during World War II, attention was again focused on Amazonia. Today, we depend upon the American rainforest for many products that we use in our everyday lives. And as a result of modern methods of sanitation, transportation, and refrigeration, Amazonia is becoming increasingly important as an area for future development.

Chapter 1 is divided into several sections that will contribute to your students' understanding of the American rainforest.

1. "Let's Look at Maps", pp. 60-61, reviews basic map skills and introduces a few new ones. Specific directions are given to help your students examine the countries, cities, physical features, and other characteristics of the American rainforest.

2. "The Land Called Amazonia", pp. 62-63, describes the hot, wet climate, the thick vegetation, and the abundant animal life in the Amazon basin. Disease and transportation difficulties are pointed out as being the major problems in the region.

3. "The People of the Rainforest". pp. 63-65, leads your class to villages deep in the rainforest, where Indians grow bananas and manioc which, together with the game they kill, serves as their chief food. Ways of adjusting to the difficult natural environment are pointed out in the Indian's food, clothing, houses, and customs.

4. "Cities and Trade in Amazonia", pp. 65-67, explains the importance of Manaus and Belem as gathering centers of the valuable products of the rainforest and points out that people in many parts of the world depend upon these products.

5. "Other Rainforests of the Americas", pp. 67-68, describes the cacao plantations in Colombia and Ecuador and discusses some of the problems and products of the Central American rainforest.

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FOR YOUR OWN READING

To supplement your own knowledge about the American rainforests, you may wish to refer to one or all of the following books.

Preston James, Latin America, Ch. 17, pp. 492-510, "Brazil: The North".
D. H. Davis, The Earth and Man, Ch. 24, "Primitive Agriculture", pp. 399-403. The homeland of the Djuka (Dutch Guiana).
R. L. Light, The Face of South America, pp. 1-42.
F. A. Carlson, "Notes on the Amazon Valley", Journal of Geography, Vol. LIV, Sept., 1955, p. 280.

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MAJOR QUESTIONS

In the study of the American rainforest, many important geographic ideas can be developed. But one that stands out very clearly is the relationship between people and their environment. This relationship is starkly revealed in the uncomplicated culture of the Amazonian Indians, who live so directly in contact with nature. Your students' understanding of more complicated cultures will be much richer if this important geographic idea is firmly lodged in their minds.

Your students may grasp this important idea more easily if they can find out for themselves how ways of living in the rainforest are interrelated with natural environment. The Major Question below may get your students started in their search for answers. Some detailed answers are given for your convenience.

Primary Objective:		Major Question #1:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.	→	How has man's way of living in the American rainforest been controlled by the natural environment?

Ways in Which Man Has Adjusted to Environment

Food	Manioc grows and stores well in hot, wet climates. Bananas grow in hot, wet climates. Wild game and fish are plentiful. Domestic animals are scarce because of unhealthy conditions and lack of pastures.
Clothing	Little is worn because of the heat and dampness. Most clothing is light colored to reflect the sun. Hats are common as protection from the sun.
Occupations	Hunting and fishing because game and fish are near at hand. Gathering food and products from the forest. Farming in small clearings, shifted frequently because the soil wears out quickly. Handicrafts for barter and recreation.
Recreation	Visiting, with visits lasting several weeks because travel is difficult.
Housing	Built of forest materials that are close at hand. Frequently built on stilts to keep them off the damp ground. Steep sloping roofs to shed the rain quickly. Outside kitchens. Near rivers.
Transportation	Few roads and dense undergrowth make boats and airplanes the main forms of transportation.

Another important geographic idea is our dependence on the Amazonian rainforest. The rainforest environment favors certain crops that cannot be grown in other parts of the world. As a result, people have come to depend on the rainforest for many of the necessities of life. The following question may be raised to get your students thinking about our dependence on the rainforest. Answers are provided for your use in the classroom.

Primary Objective:		Major Question #2:
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.	→	For what things do we depend upon the American rainforest?

Centers	Products	
Amazonia Belém, Brazil Manaus, Brazil	Rubber Brazil nuts Balsa wood	Waxes Nut oils Medical plants
Equador and Colombia	Cacao Balsa wood	Vegetable ivory
Central America	Bananas Coconuts	Cacao

You will want to keep these two Major Questions in mind as you guide your students in their study of this chapter.

SUGGESTIONS FOR TEACHING

In the pages that follow, you will find many different suggestions and ideas for teaching Chapter 1. Some of the suggestions may be used to motivate your students, others contain ideas for guiding your class in organizing and discussing textual and pictorial material, and still others present possible ways for handling students of differing ability. You will also find ideas for workshop activities and for evaluation. You will want to select the suggestions that are most appropriate for your particular classroom situation.

Arousing Interest in the Chapter. There are many ways in which you can arouse the curiosity of your students so that they will want to learn more about the American rainforests. You can call up the interest they already have in this area by mentioning things that they already know something about, such as jungles, headhunters, blowguns, and strange Indian tribes. After a few introductory remarks of that kind, you may wish to develop one of the following methods for further stimulating the interest of your students.

1. Interest can be heightened by bringing to class or recalling a news item involving Amazonia. A class discussion can be started by asking, "Where did this event occur?" (Amazonia) "What does it tell us about the place?" You may continue the discussion by having your students tell what they already know about Amazonia from books, movies, television programs, or magazine articles.

You can state that many of the things they have said are true and many are not. Tell them that they are going to visit Amazonia to see for themselves. This visit will be done through reading the text, studying the pictures and maps, and doing project work. Ask the class to pretend they are newspaper reporters gathering information for a story about the Indians of the rainforest. Remind them that in order to understand the people of Amazonia, they must get all the facts. What questions would they ask?

Have someone in the class act as a recorder and write the questions on the board as they are asked. For convenience, the questions can be grouped under four large headings: (1) Climate, vegetation, and animals, (2) People, (3) Cities and trade, (4) Other American rainforests.

Try not to answer the questions at this time since you may want to use them as the heart of future lessons. Students will learn better if you let them find the answers to these questions for themselves.

2. You can also use the textbook pictures on pp. 11-13 and pp. 59-67 to start your students talking about their previous experience with the rainforests. With that beginning, the discussion may proceed more or less as outlined above.

3. Exhibit such items as a rubber shoe, rubber ball, balsa wood, mahogany, Brazil nuts, bananas, and tapioca. Ask your class what all these items have in common. You may have to tell them that they all come from Amazonia. Ask whether they know where this region is located. After the location has been established, the discussion can again proceed as outlined above.

Getting Started (pp. 59-60). The reporter device may be used to good advantage as your students read the opening pages of Chapter 1. You may lead your students into the chapter by telling them that they are about to take off, by imaginary airplane, for Amazonia. They will be transported by plane from International Airport in Miami, Florida, to Manaus, Brazil, deep in the rainforest of Amazonia. The flight text on pages 59-60 describes important places and things seen along the route and gives your students an overview of the rainforest of South America.

The terrain picture on page 59 shows your students what the rainforest looks like. Remind them that, as reporters, they will need to ask questions about the picture. What do they see? (a river flowing through dense forest, a small clearing with some sort of house near the river bank). Ask them also to mention things they don't see in the picture (farms, railroads, cities, highways).

The point of destination is shown in the picture on page 60. The small insert hemisphere map establishes the global relationship between Amazonia and the United States and points out the route taken by the imaginary airplane. The caption above the picture gives the distance from Miami to Manaus. By doing a little arithmetic, your students will learn that it would take them about five hours to make the trip by a jet-powered passenger plane. This exercise gives your students some idea about the distance involved in their trip.

Every chapter that deals with areas outside the United States opens with a similar introduction, including a terrain picture, flight text, a small hemisphere map, and a picture of the destination city. In these introductions your students learn where they are going (location), how far away their destination is (distance), and what route they are taking (direction).

Let's Look at Maps (pp. 60-61). In "Let's Look at Maps", your students get a still closer look at the rainforests of the Americas. Some of the things they have learned from the text and pictures on pages 59-60 can now be studied in greater detail by looking at maps. Directions are given on pp. 60-61 to guide your students in a map study of the American rainforest areas. The large map on p. 61 shows the

the regions of the Americas that have the tropical rainforest climate. The map also shows rivers, cities, countries, water bodies, and mountains. The two smaller maps indicate the population and rainfall of the area pictured by the large map.

The map study works well as a full class activity. While one student reads the directions in the text, other students can work on large wall maps and the globe. The rest of the class can use the maps in the textbook.

Many of the important map skills that will enable your students to use maps intelligently are introduced or reviewed at this time. In future chapters, additional skills will be introduced a few at a time, and earlier skills will be reviewed and maintained. In this map study, the following map skills are stressed.

Map Skills	Use
Direction	Use of cardinal directions *-- north, east, south, and west.
Distance	The recognition of differences in scale
Location	The position of the equator. The finding of North and South latitude.
Symbols	Coastline, rivers (and their courses), oceans, political boundaries.
Map Legend	Hatching to indicate rainforest. Shading to indicate differences in population density and rainfall.
Comparison and Inference	Areas around the equator are generally hot. The name Amazonia is related to the river.

Vocabulary skills may also be stressed during the map study. As new and important words appear in the reading (especially the italicized words, such as course, mouth, source, rio, branches, and tributaries), they might be spelled out loud by the class and copied on the board by a *reluctant student. The whole class should then develop the meanings so that these words can become part of the working vocabulary. If your students are keeping geography notebooks, the words and their meanings can finally be entered there.

Suggested Answers for Map Study. The suggested answers for the map study are given below for your convenience.

1. The tropical rainforest areas are marked with hatched lines. Parts of the three Guianas, Venezuela, Colombia, Ecuador, and Bolivia also contain rainforest areas. The name Amazonia was chosen because the Amazon River drains most of the area.

2. The Amazon River flows into the Atlantic Ocean.

3. Amazonia is located between 13° S and 11° N latitude. The 0° parallel, or Equator, cuts the region almost in half. The climate should be hot because places near the equator receive direct rays of the sun most of the year.

Picture Observation. By guiding your students in a detailed study of the pictures in this chapter, you can accomplish several things. You can help to make your students better observors, inside and outside the classroom. You can stimulate their questioning spirit and help them to formulate theories, hypotheses, and probable conclusions. At the same time, you can prepare them to read the text for specific information that they will need in order to check their probable conclusions.

Everyone can look at a picture and see something in it, but learning fully from a picture requires special skills. Your students will need to be taught how to raise questions about a picture, find answers, make inferences, and work out probable conclusions. Experience in picture observation will provide your students with a valuable means for gathering information. This experience is especially valuable for reluctant learners, who may find something in a picture that they might not notice in their reading. Once they have been encouraged to raise specific questions about a picture, they will have something specific to look for, or to find an answer or verification for, in the text.

The class may use the text pictures on pp. 11-13 and pp. 59-67 as a beginning toward answering their own questions about rainforest environment and how people have adapted their way of living to it.

The following chart lists some questions that may guide your students in their picture observation. The chart is not meant to be all-inclusive. There are many more questions that could be asked and many more conclusions that could be drawn. Any question suggested below for one picture may be asked about other pictures if it applies. You may wish to remind your students that a picture caption frequently gives them clues about a picture but warn them that it never provides all the answers.

Page	Question	Suggested Answer	Probable Conclusion
11	What race are the people?	Indian	Indians live in Amazonia.
	What types of plants are growing?	Very thick	There are dense forests here.
	What do the men have in their hands? What do you think they are doing?	Blowgun or spear Hunting	Some people hunt.
	What kind of clothing are they wearing?	Little or none	It was warm when the picture was taken.
12 & 13	What material is used for building?	Forest products	The people use materials near at hand.
	Why does the roof slope?	To shed water	It must rain.
	Do you recognize any type of wood?	Palm trees, bamboo	Temperature must be warm.
	What is the furniture like?	Few articles Made of wood	Way of life different from ours.
59	Describe the location of the house.	In clearing near river	May use river.
	Does house look big or small?	Big	Some houses are big.
60	What activity is shown here?	Shipping and loading	
	What type of boats are in the picture?	Ocean-going and smaller	Some trade with rest of the world.
62	What does this picture tell us about travel in Amazonia?	Many people travel on the rivers.	Rivers are important.
63	Why do you think these animals have long noses?	For getting their food	There are wild animals.
64	Why can the kitchen be outdoors?	Warm weather	These people live differently than we do.
	What kind of utensils is the woman using?	Homemade	
65	How are the women and girls carrying such a heavy load?	Strap around the head	The women work.
	Why do the people grow manioc?	They use it somehow	Manioc will grow in this environment.
67	What are these men doing?	Gathering bananas	Bananas will grow here.
	What color are their clothes?	White or light	Climate is hot.
	Why do they wear hats?	Protection from sun	Climate is hot.

Reading About the American Rainforests (pp. 62-68). Once the information has been collected and probable conclusions have been developed, your students will need to check the facts. In this initial attempt at picture observation, there will probably be some wrong answers and many illogical conclusions. The verification of answers and conclusions lends itself well to directed study lessons covering pp. 62-68.

You will want to point out to your class that they are reading to gather information that they themselves have observed and deduced. You may need to restate the picture observation questions, answers, and probable conclusions so that each student will know precisely what information he is to look for in the text. The "Checking up" questions within the chapter will serve as valuable guides in organizing the search for information. Answers to these questions are given on p.9 of this booklet.

The *reluctant students can read orally or silently to find the answer to a specific question or to check one fact. The "Checking up" exercises provide you with specific questions that you can ask. Your students should be able to find their answers in one or two paragraphs. To aid them in their reading, you will need to stress and develop vocabulary along the way. Ample discussion should take place as each question is answered and before proceeding to the next question.

The **average students may also need help with vocabulary and geographic terms. But this group may read silently to check their own questions, conclusions, and information. Then they can answer the "Checking up" exercises to make sure they have found all the important information. The "Questions to Think About" and "We and They" comparisons in "Reviewing the Chapter" on p. 68 can be used to stimulate additional thinking about the geographic ideas included in the chapter.

The ***advanced students may also read silently to check their own answers and conclusions. After doing the "Checking up" exercises, they can gather additional information to contribute later to the class discussion. This material can be gathered by looking up information about the animals, people, climate, history, and unusual facts of the rainforests in reference books of many kinds. The information might be noted on flash cards, which can be used in class at a later time.

Discussing the Reading. A class discussion of the reading affords a good opportunity for reviewing information and piecing it together. Misconceptions can be cleared up, and the most important ideas can be sorted out and emphasized. Each group of students should be made to feel that it has something worthwhile to contribute to the class lesson: the *reluctant students, their basic information; the **average students, their thought questions and comparisons; and the ***advanced students, their supplementary information about the rainforest.

A review of the information may be centered around the Major Questions suggested for this chapter on p. 4 of this booklet. Other review aids are given on p. 68 of the textbook. "Words to Understand" reviews the important and new words that were introduced in the chapter. The "Questions to Think About" offer your students an opportunity to discuss and apply all of the information that was learned from the chapter. "We and They" helps your class compare the region that they have studied with their own community.

Workshop Activities. The section entitled "Your Geography Workshop", at the end of each unit in the textbook, contains several suggestions for projects and activities Although these suggestions apply to the unit as a whole, they may be adapted for use with specific chapters within the unit. Any of the suggestions on p. 90 may be used to stimulate workshop activity connected with Chapter 1.

In addition, you may wish to try the following map project. First, you will need to trace a mimeograph stencil from an outline map of South and Central America. (Instructions are given on p.20 of Booklet #2.) The map can then be duplicated and a copy may be given to each student. Remind your students that accuracy and neatness are essential in map work.

Reluctant Students	Average Students	Advanced Students
Have students fill in everything with one star (*). Give assistance where it is needed.	Have students fill in everything with one and two stars (*, **). They should be able to work alone.	Have students fill in all the items. Some may add even more from an atlas. They can give help to others.

Countries		Rivers	Cities	Other
*Brazil	***Panama	*Amazon	*Manaus	*Andes Mts.
*Guianas	***Costa Rica	*Rio Negro	*Belem	*Atlantic Ocean
*Venezuela	***Nicaragua	**Madeira	*Guayaquil	*Pacific Ocean
*Colombia	***Honduras	**Tapajoz	**Salvador	**Panama Canal
*Peru	***Br. Honduras	***Orinoco	**Rio de Janeiro	***Caribbean Sea
*Ecuador	***Guatemala	***Rio Para	**Buenaventura	
*Bolivia	***Mexico		***Iquitos	
*Cen'l Amer.			***Santarem	

SUGGESTED ANSWERS FOR CHAPTER 1

"Checking Up", p. 63

1. The trees grow rapidly because of abundant rainfall and warm sunshine.

2. There are few roads and paths. The vegetation grows very quickly so that a traveler must cut his way through the forest.

3. Many tree-living animals inhabit the rainforest, such as brilliantly colored birds, monkeys, snakes, squirrels, raccoons, and sloths. The tapir and anteater look for food on the ground. Everywhere there are many types of insects. The tropical diseases and scarcity of pasture account for the few domestic animals.

"Checking Up", p. 65

1. Hunting and fishing are uncertain so the people depend on their gardens. The heavy rainfall washes away the minerals needed for plant growth, and the garden spot must be moved every few years.

2. A maloka is a large oblong or oval apartment house that may house the people of a whole village. Sometimes as many as one hundred people live in a maloka. Each family has a fire and a section of its own. There are few conveniences; wooden benches and stools, along with baskets, clay pots, and hammocks, make up the furnishings.

3. The Indians make fish traps, baskets, bows and arrows, canoes, dugouts, pottery, hammocks, and stools for trade.

"Checking Up", p. 67

1. Belém is called the "Gateway to the Amazon" because all ships and most trading goods that enter or leave Amazonia must pass through the city.

2. Tile is widely used in Belém because it is not destroyed by heat and rain. Wood and paper decay rapidly.

3. Manaus is an important trading center because products shipped down the many branches of the Amazon are collected and exchanged here where two large transportation lines meet, the Rio Negro and the Amazon River. Floating docks must be used because at flood time the river rises fifty or sixty feet at this point.

"Checking Up", p. 68

1. Ecuador, Colombia, and Brazil, even though they contain part of Amazonia, have other areas of rainforest. In Central America, all of British Honduras and parts of Panama, Costa Rica, Nicaragua, Honduras, and Guatemala have the hot, wet climate. Parts of Mexico and the Dominican Republic in the Caribbean also have this climate.

2. Some of the farming in Ecuador, Colombia, and Central America is done on large plantations.

3. Some important products are cacao, balsa wood, rubber, vegetable ivory, bananas, and coconuts.

"Questions to Think About", p. 68

1. Planes and boats are the chief means of travel because there are few roads and paths, and trails become overgrown very quickly.

2. Getting a food supply is one of the most important things in life. The men catch and hunt fish and game, which are plentiful in their rainforest land.

3. The people live near the rivers and streams in order to be near the transportation system.

4. Making a clearing in the rainforest is difficult, but it must be done in order to plant a garden because trees and vines block out needed sunlight and undergrowth crowds out food plants.

5. The temperature is hot and little clothing is needed. Also it is hard to keep clothing dry in the damp climate. The Indians wear clothing mainly for protection from the scratchy plants and undergrowth.

6. Since forest material is so plentiful, near at hand, and free for the taking, it is used by the Indians to build houses. The houses have steeply sloping roofs to allow the abundant rainfall to run off quickly.

7. The cities of Belém and Manaus are important because they are gathering places for the products of Amazonia. The cities also supply the region with needed products that must be brought in from the outside world.

8. Many problems are caused by the rainforest climate. Among them are tropical diseases (malaria), sanitation, erosion, wearing out of the soil, and the remoteness of the region.

"We and They", p. 68

Questions in this section require comparison of life in the American rainforest with ways of living in the students' local community. One way to discuss these comparisons is to prepare a simple chart of two columns on the board for questions 1-4. One side of the chart can be used for the local community and the other for the rainforest areas.

The products asked for in question 5 should include rubber, Brazil nuts, balsa wood, waxes, nut oils, cacao, vegetable ivory, and bananas.

EVALUATION EXERCISES

When your students have completed their study of this chapter, it is well to take time out to evaluate how much progress they have made in understanding the important ideas and in developing certain skills and appreciations. The exercises below will help you to evaluate progress. Some of the exercises may also be used during the study of the chapter to evaluate progress on specific skills or to test understanding of specific information. Answers are indicated with each exercise.

To Check on Factual Information

Directions: Spell the word down by putting the first letter of your answer in the blank space before each number. The completed word is the name of an important city deep in the Amazonian rainforest.

M 1. A root plant used for food. (manioc)
A 2. Largest rainforest in the Americas. (Amazonia)
N 3. A large tributary of the Amazon. (Negro)
A 4. An animal of the Amazon with a long nose. (anteater)
U 5. A condition that hinders growth of domestic animals. (unhealthy)
S 6. The place where a river rises or begins. (source)

To Measure Your Students' Understanding of the Meaning of "Export" and "Import", and to Reinforce the Concept of Interdependence

Directions: Pretend you are a visitor on the docks at Belém or Guayaquil. As you look over the crates, boxes, and barrels lined up at the docks, see whether you can place the proper label (Import or Export) on the products.

Sewing machines (Im)
Cacao (Ex)
Bananas (Ex)
Cotton cloth (Im)
Medicine (Im)
Balsa wood (Ex)
Fire arms (Im)
Nut oil (Ex)
Rubber (Ex)
Coconuts (Ex)
Gasoline pump (Im)
Tapioca (Ex)
Outboard motor (Im)
Wheat (Im)
Baskets (Ex)

To Check Map Skills

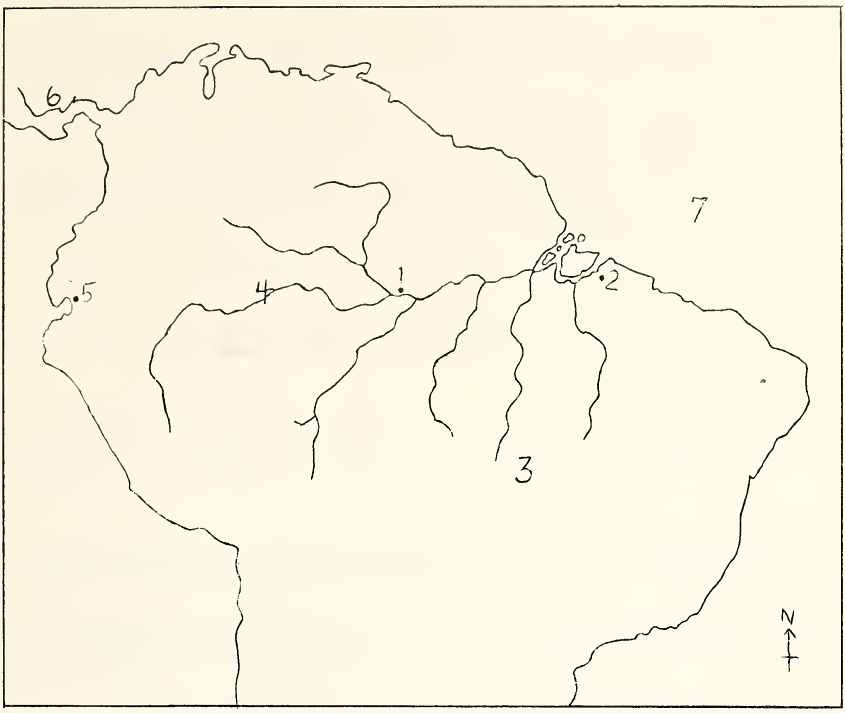
Directions: On the map, find the number that indicates the location of each place listed below. Write the appropriate number in front of each place.

3 Brazil 1 Manaus 2 Belém 7 Atlantic Ocean

6 Central America 5 Guayaquil 4 Amazon River

If you traveled from 1 to 2, in what direction would you be going? (eastward)

(Note: Map appears on following page)



To Check Students' Understanding of Relationships

Directions: In each of the three questions below, choose the answer that applies best to the people of the American rainforest. More than one answer may be used.

1. The type of clothing worn is frequently determined by the climate. (a, b, e)

   a. little clothing c. dark clothing e. hats
   b. light colored clothes d. no hats f. woolen clothing

2. The foods eaten are those that grow best or are easy to get. (d)

   a. corn & wheat c. ham & eggs e. milk & cheese
   b. beef & pork d. manioc & bananas f. fish & rice

3. Climate and environment limit how people make a living. (c, f)

   a. mining c. hunting & fishing e. herding & grazing
   b. stationary farming d. manufacturing f. shifting farming

STUDENT READING LIST FOR CHAPTER 1

NON-FICTION

*Goetz, D., Let's Read About South America, Fideler, 1951. Parts of this book deal with the rainforest, especially Chapter X, "Forests in South America".

*Rothery, A., South American Roundabout, Dodd, 1952. "Up the Amazon" with its snakes, monkeys, and Indians makes Chapter X a breathless experience.

**Sanderson, I., John and Juan in the Jungle, Dodd, 1953. Two boys make a trip through the American jungles and learn the strange ways of some of the animals.

FICTION

**Sperry, A., Thunder Country, Macmillan, 1952. Chad Powell, son of an ornithologist, travels with his father into the Venezuelan jungle where a bird hunt turns into a man hunt.

*Tee-Van, H., Red Howling Monkey, Macmillan, 1926. The life of a native boy born and raised in the jungle of British Guiana makes a fascinating story.

**Ullman, J., River of the Sun, Lippincott, 1951. An ex-army pilot plunges into the vast Amazon jungle and takes part in a hair-raising search for Dr. Nils Barna who has disappeared in the wilderness.

**Waldeck, T., White Panther, Viking, 1941. Ku-Ma, the white panther, matches his strength, courage, and cunning with beast and man.

*Williams, H., Kimbi, Indian of the Jungle, Heath, 1941. Armed with his grandfather's blowgun, Kimbi tries to save the women of his village from a jaguar.

AUTOBIOGRAPHY

**Waldeck, T., Jungle Journey, Viking, 1946. Poison arrows, untrustworthy natives, and game hunts make this an exciting account of a scientific expedition into the rainforest of British Guiana.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 1

The Amazon Awakens, 1944 (mp, color, sound, 33 min, #38). The Amazon River Basin... its natural resources, its history, industries, and possibilities for the future.

Amazon River Basin - A Geography, 1953 (set 4fs, b&w, 30 fr, #7). "Animals of the Amazon", "Geography of the Amazon", "People of the Amazon", "Products of the Amazon".

Amazon Village, 1949 (fs, color, 27 fr, #21). How the people of the Amazon have adapted to their rainforest environment and how they make their living.

Brazilian Rain Forest, 1954 (mp, color, sound, 11 min, #34). Explains the importance of the water cycle in the drainage basins of the Amazon and Paraguay Rivers. Depicts the abundant plant and animal life in the tropical rainforest of Brazil as well as the life of the Indians who inhabit it.

Night in the Jungle (mp, b&w, sound, 10 min, #43). Depicts the many forms of insect life in the Amazon jungle.

Rubber River, 1946 (mp, color, sound 15 min, #36). An exciting search for rubber in Central America where the only access is a rampant river.

Story of Bananas, 1947 (mp, b&w, sound, 11 min, #52). A story of tropical agriculture from the clearing of the jungle and the planting of the fruit to the harvest and shipment to the United States.

Tropical Lowland (Amazon River, Brazil), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 57 fr, #65). Primitive farming and gathering of forest products by native families. Illustrates ways of life in a large, hot, humid, river basin.

CHAPTER 2: ALONG THE CONGO

YOUR OWN LOOK AHEAD INTO CHAPTER 2

One hundred years ago the people of the African rainforest were considered savages who roamed the jungle in search of enemies and food. Today, these people are thinking about self-government, education, public and personal health, and community problems. Many students have been led to believe through stories and the movies that the people of Africa live today as they did in the past. They are unaware of the huge advances made by the African peoples in improving their ways of living and in strengthening their relations with other people. This chapter gives you an opportunity to correct any mistaken attitudes that your students may have regarding the African people.

The chapter is divided into a number of sections that will help your students to organize their thinking.

1. "Let's Look at Maps", pp. 70-71.

2. "The Land of the Congo River", pp. 72-73, describes the vegetation, topography, and animal life in the Congo River Basin.

3. "People of the Congo Region", pp. 73-74, presents a view of the Bantu people and describes how they have adjusted their ways of living to the heat, heavy rainfall, and high humidity of the African rainforest.

4. "Making a Living from the Forest", pp. 74-76, gives an account of various occupations in the rainforest, with emphasis on Bantu farming and gathering forest products, including nuts, latex, and palm oil.

5. "Changing Ways of Living", pp. 76-78, points out the changes that have been brought about by European influence. Trade and better transportation have encouraged the growth of cities. The people have also been able to improve their health standards, education, human relations, and standards of living.

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FOR YOUR OWN READING

To add to your own knowledge of African life, you may wish to refer to the following books.

D. H. Davis, The Earth and Man, Ch. 22, pp. 372-376, "Nomadic Hunting Populations of Tropical Forests"; Ch. 24, "Primitive Agriculture", pp. 394-398, "The Fang and their homeland".

J. A. Hunter, Hunter, Ch. 11, "The Ituri Forest"--a description of the forest in which the African pygmies live.

L. Dudley Stamp, Africa: A Study in Tropical Agriculture, Ch. 16, "Equatorial Africa".

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MAJOR QUESTIONS

The chapter on the African rainforest raises several questions that are related to the Primary Objectives of The World Around Us. Here are two that you may wish to ask your students as they study this chapter. Answers are given under each question for your convenience.

Primary Objective:		Major Question #1:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.	→	In what ways do the people of the African rainforest live similarly to the people in Amazonia?

The natural environment of the Congo is similar to that of Amazonia--both have dense forest growth, high temperatures, heavy rainfall, high humidity, many insects, wild animals, huge river systems, and locations near the equator. The people of Africa, like those in Amazonia, have learned to adapt their ways of living to this environment.

Evidences of Similarities Between Amazonia and the Congo

Food	Manioc, bananas, vegetables, domestic animals scarce.
Clothing	Little worn and light colored.
Occupations	Hunting and fishing, gardening, gathering forest products, and handicrafts.
Housing	Built of forest products, sloping roofs, many on stilts, and near rivers.
Recreation	Dancing, music, and visiting.
Transportation	Mainly on rivers. Some air transportation.
Problems	Quick wearing out of soil, erosion, health and disease, transportation, and communication.

This chapter also introduces the idea that man-made, or cultural, changes in the environment may affect a society's way of living. You can start your students thinking about this concept by asking another question.

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

Major Question #2:
How have changes in the environment brought about changes in the way people live?

Cultural Changes	Resulting Changes in Ways of Living
Colonial System Increased trade Improved transportation Improved communication Formal education	Fuller development of natural resources. oil palm latex bark, leaves and roots for medicine iron ore cacao
	People moved from native villages to help build cities. Leopoldville Stanleyville Ponthierville Matadi
	People found new jobs available. railroaders miners construction men truck drivers office workers factory workers storekeepers businessmen lawyers doctors clergymen teachers
	Standard of living was raised. new farming methods erosion control insect control modern medicine health protection preparation for self-government

SUGGESTIONS FOR TEACHING

In teaching Chapter 2, you may wish to use again any ideas that worked well with your classes as they studied pages 8-56 and Chapter 1. You might also want to try some new suggestions included in the following pages.

Arousing Interest in the Chapter. In arousing interest in the Congo, you will want to draw upon your students' previous experiences to the fullest.

1. You can start a class discussion by having pictures of smoke signals, a pony express rider, a telephone, and a television set. Ask your class how each of these articles is used. Follow this by asking them to think how these methods of communication have changed the lives of people in the United States. As the class discussion progresses, you can lead your students' thinking toward the rainforest area by asking, "Do you think these things would change the lives of other people? Would they have changed the lives of the Indians in Amazonia? The people you are about to visit have some of these improvements in communication. How do you think these improvements have changed their ways of living?"

Your class should be encouraged to raise some important questions at this point. You may find it helpful to keep a record of the questions for future reference. Possible questions might include: "What improvements in communication do the African people have? How did they get them? How have these improvements changed their ways of living?"

2. A similar discussion, with similar questions, might be developed around a series of pictures on transportation, showing progress from walking to flying.

3. A film or filmstrip about the Congo region can also be used to create interest. Have your students look for differences in transportation and communication between Amazonia and the Congo. Once the differences have been noted, you can continue the class discussion along the lines indicated above.

After the class has raised and listed their unanswered questions, have them look at the pictures in Chapter 2 and talk about the ways in which the Congo is like Amazonia and the ways in which it is different. The pictures on pp.70 and 77 demonstrate differences (modern buildings, roads, railroads). The remaining pictures can be used to point out similarities.

Again try to give your students a preview of the chapter and a purpose for study without answering questions for them. Most of the answers will become apparent as your students read the text, study the maps and pictures, and participate in workshop activities.

Getting Started (pp. 69-70). On this trip, your students will board the make-believe airplane in New York and head for the Congo. You might suggest that they check the route before taking off. First, have an **average student point out the shortest route on a wall map by indicating the route as a straight line from New York to Leopoldville. Then, have an ***advanced student point out the shortest route on a globe. (A piece of string or a measuring tape strung from one city to the other will indicate the shortest possible route; this route can be drawn on the globe with chalk.)

On most map projections, the straight line from New York to Leopoldville will not be the same as the straight route on the globe. If the two proposed routes indicated by your students do not turn out to be the same, ask if someone in the class can explain the reason. If no one can, you might explain that the globe route is the shortest because it follows the actual shape of the earth. You might add that the shortest route between two places on the earth is called a Great Circle route.

If it is possible, draw both routes on the wall map. Your class will then be able to compare them more easily. The shortest possible route may actually appear to be the longer on the map. You can point out that this inaccuracy is one of the disadvantages that results from drawing the spherical earth on a flat surface.

Once the shortest route has been determined, the class might look at the little inset map on p. 70 of the textbook. This map and the flight maps in succeeding chapters are too small to show great circle routes clearly. The routes shown might be followed by a pilot but are intended primarily to indicate the direction of the destination point from the departure point. The caption provides your students with information from which they can figure out how many hours the trip might take. Finally, by reading the flight text and studying the pictures on pp. 69-70, they will learn about important things that can be seen along the way.

"Let's Look at Maps" (pp. 70-71). The trip to Amazonia, in Chapter 1, involved map work that introduced some definite map skills. In the map study in Chapter 2, you will be able to review some of the earlier skills and introduce new ones to your class. The following chart indicates these skills.

The Map Skills

Skills	Review	New
Direction	Use of latitude to find direction	Use of longtitude to find direction
Distance	Recognition of difference in scale	Comparisons of scale with insert maps and world map
Location	Use of latitude	Relative locations
Symbols	Coastline, rivers (and their courses), ocean, political boundary	Cities, falls, continents
Map Legend	Hatching to indicate rainforest Shading to indicate differences in population density and rainfall	Shading to indicate elevation, elevation in feet Shading to indicate precipitation in inches
Comparisons and Inferences	Areas around the equator are generally hot	Latitudes of two areas compared Elevations of two areas compared Rainfall of two areas compared Inference about people living near bodies of water

Again, it is best to do the map exercise orally, following the procedure suggested in Chapter 1. Don't forget to stress the italicized word river basin, which is defined in the text, and the explanation of waterfalls. These are important geographic words with special meanings that will be used repeatedly in the reading material at a later time.

Suggested Answers for Map Study

1. By following directions, your students can find the part of Africa that is pictured on the main map.

2. The rainforests in Africa are between 10°N latitude and 8°S latitude. Amazonia's bounding latitudes were 11°N and 13°S, which are almost the same as those of the Congo. You can guess that the temperatures are about the same (high). The equator passes through the Congo also, and this, too, indicates a high temperature.

3. The Congo River flows into the Atlantic Ocean.

4. Falls occur in the Congo River because the water is dropping from one elevation to another at a very rapid pace.

5. The elevation of the land around the Amazon is between sea level and 1,000 feet. There are no falls in the Amazon because the changes in elevation are very gradual. The elevations are higher in the Congo basin and the changes in elevation are more rapid. The river drops from 3,000 feet to sea level.

6. Besides the Belgian Congo, parts of French Equatorial Africa and Nigeria are in this large rainforest area.

7. The smaller of the rainforest areas is almost due west of the Congo basin. It includes the country of Liberia and parts of Sierra Leone, Ivory Coast, Gold Coast, and French West Africa.

8. The rainfall in the Congo basin is heavy. The rainfall in Amazonia is also heavy. The Amazon basin has the darkest shading (over 80") and some of the next darkest (40" to over 80"). The rainfall in the Congo basin is slightly less (40" to 80").

9. The people live near the rivers and along the coast to be near a transportation line and to have a handy supply of food.

Reading About the African Rainforests (pp. 72-78). Your students have previously had a chance to discuss what they already know about the African rainforests, and they have had a chance to get a quick overview of the area, comparing it with Amazonia. As they attempt to find out new information, their search may be helped if they are asked to find the answers to certain questions. The Major Questions on pp. 13-14 of this booklet may be used. Other questions might include:

1. What are the rainforests of Africa like?
2. Who lives in the African rainforests?
3. How do the people make a living?
4. How and why have ways of living changed?

Your students may wish to add questions of their own. You can help them by constructing questions based on those in the "Checking Up" exercises on pp. 73, 74, 76, and 78, or by using these questions exactly as they appear in the textbook.

The *reluctant students might search for answers to very broad questions. These broad questions, however, should be broken down for them into several specific questions. You can develop the reading skill of these students by raising very specific questions for every paragraph or two. These questions can be written on the chalkboard below a wall map, with question #1 placed at the bottom, #2 on top of it, #3 on top of #2, and so forth until all the questions are written from the bottom of the board upward. The questions on the board might look like this:

7. From what do the natives make their dugout canoes? (Answer appears in picture caption)
6. Why is the tsetse fly dangerous?
5. What kinds of insects exist in the rainforest?
4. Why are the animals hard to see?
3. Why is it so dark in the rainforest?
2. Why don't the trails become overgrown?
1. How can we get a close look at the rainforest?

Chief question: What are the rainforests of Africa like? (Read The World Around Us, pp. 72-73.)

When the questions have been listed, the wall map can be pulled down to cover all the questions. As the reading lesson starts, the map can be raised just enough to reveal the chief question. One of the students might read this question out loud. Then the map can be raised again, this time to show the first question. Another student can read this question orally. When everyone understands the question, have the class open their books to p. 72 and read silently until they discover the answer to the first question. When they have found the answer, they might raise their hands. After most of the hands are up, you can check to see whether they have found the proper answer. So that everyone can participate in the lesson, you might encourage the students to discuss their answers.

With question #1 answered, the map can be raised to uncover #2. The procedure suggested above can be followed for this question and all the others on the board. After the reading has been completed and each short section has been discussed, the whole selection should be reread silently. Then this group is ready to tackle the "Checking Up" questions on p. 73. Once these questions have been answered and discussed, an answer to the chief question should be attempted. This answer might be in the form of a short written paragraph.

A similar procedure might be followed with this group of students to guide them in their reading of pp. 73-78 and in answering the "Checking Up" exercises on pp. 74, 76, and 78.

With **average students, a slightly different method of teaching might be attempted. After the chief question or questions of the day are understood, these students should be able to read pp. 72-78 silently and find the answers to the "Checking Up" exercises. This could be a written assignment. After a discussion of the written answers, the selection should be reread for unity and organization. Then the "Questions to Think About" on p. 78 can be answered and discussed by this group. Finally, these students can prepare their answers to the chief question or questions for the lesson.

The ***advanced students can read silently to find the answers to the chief question or questions and to the "Checking Up" exercises. They can also prepare answers for several of the "Questions to Think About" and for the comparisons under "We and They" on p. 78. After this group has checked other books for additional material, some specific topics for research might be assigned. Here are a few possible topics:

1. The history of African colonization
2. The story of David Bruce and the tsetse fly
3. The uses of cacao, latex, palm oil, etc.
4. Earth movements and the rainforest (p. 421 may be used as reference material)
5. An account of pygmies in the rainforest
6. The interdependence between the rainforest and the rest of the world

Such assignments not only give your advanced students practice in doing research but also help to broaden their understanding of the people in the Congo basin.

Summarizing the Reading. One method by which the class as a whole may summarize the reading is to have them build a "living" paragraph. You can do this by asking each member of the class to write one or two sentences that contribute answers to the chief question. (The chosen question might be written on the board.) Hear some of these answers and have the students with the best answers go to the front of the room. You will want to include *reluctant, **average, and ***advanced students. When a sufficient number of students have been selected, each of them can reread his sentence, one student reading directly after another. You may want to shift the position of several of the students to achieve clarity in the paragraph.

The next reading should be a smooth-flowing answer to the chief question, with each student reading his own sentence. In the final reading, a little humor may be added by letting one of the students be the title, having the student with the first sentence take a step backwards (the paragraph indentation), and letting another student be the period at the end.

Workshop Activities. In working with class projects, you may find it advisable to divide your class into committees. This not only allows you to supervise several projects simultaneously, but gives your students valuable experience in working together in small groups on some common project.

You may wish to devote small portions of several class periods to project work, or you may prefer to set aside one whole period at convenient times. In the activities suggested here, all types of students can contribute their share to the committee's project. It is well to proceed with committee work slowly. In the beginning, committees should be given simple tasks that they can accomplish rather quickly on their own. After the committees have learned to work efficiently on small projects, more difficult ones can be attempted. In doing project work for this unit, your committees might follow these suggestions:

Flash Card Committee	Library Committee
Print on large cards the difficult words in the chapters of this unit. Use the words listed at the ends of the chapters on pp. 68, 78, and 89, plus other words that have come up in the class discussion. These cards can be used by the committee to test the rest of the class on their vocabulary. (Additional suggestions for games involving the use of flash cards will be given with later chapters.)	Visit the school or local library to secure some of the books listed in the "Student Reading List" for each chapter. (You will need to provide your committee with copies of the lists in this manual.) See that books relating to the chapters and unit are displayed in the school library or in the classroom. Prepare posters or give brief book reviews to interest members of the class in supplementary reading for information and for pleasure.

Art Committee Draw pictures, posters, cartoons, graphs, and charts that illustrate important points covered in the unit's work. Some suggestions for pictures for Ch. 2 might be: illustrate some of the contrasts pointed out in the last paragraph on p. 78, or show life before and after the cultural changes discussed on pp. 76-78.	Weather Committee Record daily weather data in the classroom. (Refer to the procedure on p. 9 of Booklet #2 for hints on observing and keeping weather data.) These records can be used in comparing the climate of places your class will study with that in your local community.
Museum Committee Collect and take charge of objects brought into the classroom for display. Keep a list of the objects and their owners. Label all objects properly and display conspicuously and interestingly. Keep the collections dusted.	Bulletin Board Committee Arrange the class bulletin board. Secure picture material from magazines, newspapers, from the art committee, or some of the other committees. (Current events should not be overlooked, but they should be summarized in the students' own words.)

If your assignments to the committees are very clear and your instructions are precise, the various committees should be able to proceed quickly on their own. As the committees work, you may wish to visit each group to offer suggestions and criticisms. The results of the various projects should be readily available for classroom discussion at any time.

Additional ideas for projects are listed on p. 90 of the textbook.

SUGGESTED ANSWERS FOR CHAPTER 2

"Checking Up," p. 73

✓ 1. Some of the animals found in the Congo region are monkeys, birds, snakes, lizards, hippopotamuses, crocodiles, fish, turtles, and insects. The animals are not usually seen because their colors blend with those of the forest, or they lie hidden or run quickly from sight. The tsetse fly is dangerous because it carries the deadly sleeping sickness germ.

2. There are few domestic animals in the Congo because of insect pests, especially the tsetse fly, and the shortage of grasslands and grain crops.

3. The climate of the Congo is very similar to that of Amazonia. Both regions have high temperatures, heavy rainfall, and high humidity. The Congo, however, does have slightly less annual rainfall than Amazonia.

"Checking Up," p. 74

1. The Bantu people belong to the Negro race and speak a common language with different dialects. They trade their farm products with the Negritos, who hunt for a living.

2. The Bantus seem slightly more advanced than the Indians in Amazonia because they have discovered how to use metal (iron) tools.

3. Blacksmiths, potters, and woodcarvers are some of their workmen. Others weave baskets, make grass cloth, or braid mats. They trade their products with other villages for things they do not have.

"Checking Up," p. 76

1. The men clear the forest, and the women plant and harvest the crops.

2. Four things that make farming difficult in the Congo region are high temperatures and excessive rainfall, rapid weed growth, animal and insect pests, and quick wearing out of the soil.

3. The "oil palm" is an important cash crop because other people of the world need the oil for making oleomargarine and shortening. The

Congo supplies one half the world's supply of palm oil. The Bantus sell the palm oil and use the money they earn to buy manufactured goods.

"Checking Up," p. 78

1. Rivers are still the most important transportation routes because building highways and railroads is expensive in the rainforest. Also, the Congo River and its branches provide 8,000 miles of useful waterways. But even river transportation is not easy because there are rapids and waterfalls. Railroad lines have been built around the falls, and freight cars transport goods where necessary.

2. The chief cities of the Congo are Stanleyville and Leopoldville. They are important transportation and trade centers.

3. Better means of communication and improved methods of transportation are helping to change the African rainforests. Many of the people have moved from villages to towns and cities, where they have found new job opportunities. Many farmers are settling on permanent farms. Schools are being built, and the people are learning about better methods of farming, sanitation, and conservation. The discovery of new resources is helping to increase trade with other parts of the world.

"Questions to Think About," p. 78

1. Building roads and railroads is easier in the Congo because the land is higher and better drained and there are more people to do the work. Because the people need roads to transport their products, they are willing to work hard to maintain the roads. The European nations which rule parts of the Congo region have also helped by building railroads or supplying money for them.

2. Many of the Bantu people are farmers who grow vegetables in small clearings, as do the Indians of Amazonia. Others collect forest products, such as roots, bark, and leaves used in making medicines. They also gather tree waxes and latex. Their most valuable cash crop is palm oil. Many of the rainforest people have moved into cities, where they work in offices, stores, and factories. Some of them have become businessmen or have professional careers, while others work on the railroads and in mines.

3. As the Congo is being "opened up" by better means of communication and transportation, trade is increasing. Cities such as Stanleyville and Leopoldville are important because they are the chief centers of transportation and trade. Stanleyville is an important transfer point for railroad and steamer traffic. Leopoldville is increasing in importance as a manufacturing city and as a railroad center connecting the rainforest with the ocean port of Matadi.

4. Telephone, telegraph, and radio are helping to bring different parts of the African rainforest closer together. Airplaines, river steamers, dugout canoes, railroads, trucks, and bulldozers, are among the means of transportation that are helping to "open up" the Congo.

5. The African rainforests are useful to people all over the world because they contain valuable products that these people need and want. Some of these products include raw materials for making medicines, latex for rubber, tree waxes for shoe and furniture polishes, palm oil, and cacao. The mines in Liberia and Nigeria supply iron ore to steel mills in the United States and other countries. Because the people of the rainforest sell or trade these products for manufactured goods produced in other countries, they are helping to stimulate industry and trade all over the world.

"We and They," p.78

1. The Bantus use the palm oil for cooking oil, fuel, and as an insect repellent. We use the palm oil for oleomargarine and shortening substitutes.

2-4 You can have the students answer these questions best from observations made around your local community. This will give them practice in using some of their observation skills on actual surroundings with which they are familiar.

EVALUATION EXERCISES

The following exercises will help you to evaluate the progress your class has made in their study of Chapter 2.

To Check on Factual Information

Directions: Starting with 0° question, answer the questions up the thermometer to see if you can get to the boiling point.

How Warm Are You?

212°	What insects sometimes destroy buildings? (termites)
150°	What disease do certain mosquitoes sometimes carry? (malaria)
100°	What disease does the tsetse fly carry? (sleeping sickness)
64°	What is a word meaning moisture in the air? (humidity)
32°	What happens when a river changes elevation quickly? (falls)
0°	What race of people inhabit the African rainforest? (Negroes)

To Check on Relationships between General Ideas and Specific Evidences

Directions: Match the numbered items with those in the two other columns. Answer by using numbers and letters only. Each number in your answer should have a capital letter and a small letter beside it.

Three on a Match!

1.	(Be)	Rivers are the chief form of transportation	A. Gardens must be changed	a. rubber
2.	(Db)	There are few domestic animals.	B. Rainforest is dense	b. tsetse fly
3.	(Ea)	Some rainforest products are valuable.	C. Negroes	c. Bantu
4.	(Ad)	Villages move from place to place.	D. Disease	d. soil wears out
5.	(Cc)	People in the rainforest	E. Latex	e. Congo

To Check on Observation skills and the Understanding of Similarities Between Amazonia and the Congo

Directions: Study the pictures on pp. 59 and 69 to find answers to the following questions.

1. By comparing the picture on p. 59 with the one on p. 69, write down three things that are similar in these two pictures.

   Possible Answers: Houses are near the river.
   There is dense forest.
   Houses are made of similar material.
   Houses have sloping roofs.
   Houses are in clearings.
   Houses seem large.

2. Where is the house on p. 59 located? (Amazonia)
   Where is the house on p. 69 located? (Congo)

3. Into what ocean will the water in the river on p. 59 flow? (Atlantic) on p. 69? (Atlantic)

To Check on the Understanding of the Effect that Cultural Changes Make in the Lives of People

Directions: In each column in the following chart, one box has been left blank. Fill in the blank box with the proper information. (The answers are given in parentheses.)

Before	Improving Change	After
People grew, gathered, or hunted for food largely for their own use.	World trade	(People now grow cash crops. Some examples can be given.)
People lived almost solely along the rivers.	(Transportation, or similar answer.)	Some people now live near the highway or railroad.
(Hunters, fishermen, farmers, craftsmen)	World trade, education, transportation.	Many occupations are now available.

STUDENT READING LIST FOR CHAPTER 2

FICTION

*Davis, N., Picken's Great Adventure, Oxford, 1949. With only a knife and a little food, Picken leaves his native village to seek the excitement of killing bushcats and snakes and succeeds in foiling the plans of some thieves.

*Davis, N., Picken's Exciting Summer, Oxford, 1951. Picken and his pet monkey, Benjie, have an exciting time fishing in the ocean, visiting a moon festival, and witnessing a jungle fire.

***Forester, C., Sky and the Forest, Little, 1947. Loa, both a chief and a god to his people, is almost helpless when Arab raiders attack his village looking for slaves.

**Gatti, A., Saranga, the Pygmy, Scribner, 1939. Alone in the jungle for the first time, Saranga, a Mambuti Pygmy, proves himself a true hunter.

**Hogue, W., Bob Clifton, Elephant Hunter, Holt, 1949. Bob Clifton decides to hunt elephants in the Congo Basin but ends up a captive facing a trial by ordeal.

**Hogue, W., Bob Clifton, Congo Crusader, Holt, 1951. Answering a desperate cry for aid, Bob Clifton penetrates deep into the rainforest and tries bravely to prevent a double tragedy.

***Stinetorf, L., White Witch Doctor, Westminster, 1950. A medical missionary proves her "magic" is more powerful than superstition.

**Waldeck, T., Jamba the Elephant, Viking, 1942. Jamba, a captive elephant, has to decide on escape or staying captive and remaining near a boy he respects.

AUTOBIOGRAPHY

**Gatti, A., Kamanda, an African Boy, McBride, 1953. Kamanda has a strange experience as he accompanies a white man's expedition.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 2

Belgian Congo (fs, b&w, #6). Presents the story of the Belgian Congo--the country, its topography and natural resources, and its people. (School may retain film permanently.)

Giants and Dwarfs, 1952 (mp, color, b&w, sound, 13 min, #26). Contrasts the different tribes of natives of the Belgian Congo. A visit to a large animal sanctuary is included.

Jungle Yachts in the Belgian Congo (mp, b&w, sound, 22 min, #18). Commander Gatti's expedition among strange people and strange animals in their native environment of the Congo Basin.

Leopoldville, 1948 (mp, b&w, sound, 17 min, #26). The capital of the Belgian Congo is shown as a surprisingly modern city with high standards of living.

Life In A Jungle Village (mp, b&w, sound, 11 min, #42). Building, farming, games, and manners of the natives in central Africa.

Life In Hot Wet Lands (Congo Basin), 1949 (mp, color, b&w, sound, 10 min, #20). By following a jungle boy and his family, this film shows how climate influences the lives of the people in hot, wet lands.

N'Gisi, 1948 (mp, b&w, sound, 10 min, #26). An advanced film dealing with unusual sections of the Belgian Congo, sleeping sickness, and the battle against it.

People of The Congo, 1939 (mp, b&w, sound, 11 min, #23). Head bindings, tattooing, native arts and crafts, and musical instruments make up this study of the Mangbetu people.

Pygmies of Africa, 1938 (mp, b&w, sound, 22 min, #23). The Pygmies of the Congo live by gathering, hunting, and trading. Shows a typical village and the daily tasks necessary for life.

Story of The Jungle, 1938 (mp, b&w, sound, 40 min, #42). A trip through the jungles of the world: the Amazon, the Congo, Indo-China, and Borneo. Daily life of the people in a jungle village of the Congo is illustrated.

Tropical Forest Village (Congo Basin), 1950 (mp, b&w, sound, 9 min, #65). Native jungle life in the hot, wet Congo Basin. The natives are primitive people living out of doors. The men hunt large game and the women and children gather plants.

CHAPTER 3: FROM THE GANGES TO NEW GUINEA

YOUR OWN LOOK AHEAD INTO CHAPTER 3

You are about to take your class to an area of the world that has attracted people for centuries. The desire to tap the riches of the Far East was the driving force behind such men as Vasco da Gama, Bartholomew Diaz, and Christopher Columbus. This area of the world is still rich in many raw materials and crops that are needed in the rest of the world.

Chapter 3 has several sub-divisions which will help your students see contrasts in living patterns and realize the interdependence of this region with the rest of the world.

1. "Let's Look at Maps", pp. 80-81.

2. "Land of Striking Contrasts", pp. 82-83, points out the many contrasts in land forms, people, language, and government which are found in the Asiatic rainforest.

3. "Livings from Land and Sea", pp. 83-86, shows how the various people make their living by hunting, fishing,gathering products from the forests, or farming. The problems of rainforest farming are again mentioned, but it is pointed out that in Asia plantation farming is highly developed. The life of the Javanese rice farmers is described in detail and reasons for their success in producing surplus crops are given.

4. "Producing for the Rest of the World", pp. 86-87, discusses the many crops and agricultural products that are sold to the rest of the world. The presence of valuable minerals such as oil, iron ore, tin, and manganese is related to the growth of trade and manufacturing.

5. "Trade Makes Modern Cities", p. 88, describes Singapore, Jakarta, and Manila, the leading collecting and trading cities in the Asiatic rainforest.

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FOR YOUR OWN READING

To add to your own knowledge of the Asiatic rainforest, you may want to refer to the following books.

George Cressey, Asia's Lands and Peoples, Ch. 37, "Malaya"; Ch. 38, "Indonesia"; Ch. 39, "The Philippines".

Ellsworth Huntington, The Human Habitat, Ch. 8, an interesting description of the civilization of the rice lands.
R. J. Russell and F. B. Kniffen, Culture Worlds, Ch. 46, "The Malayan World."

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MAJOR QUESTIONS

The startling contrast between the Asiatic rainforest and the other rainforests in the world is one of the important ideas you will want to stress with your students The following question will direct their thinking:

Primary Objective:		Major Question #1:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.	→	In what ways have the people of the Asiatic rainforest learned to change and control many things in their environment?

Differences in Natural Environment

1. Better soil due to volcanic eruptions.
2. Better access to the ocean because these areas are islands and coastal plains, thus are open to outside influences.
3. The people have the caraboa, a domestic animal, to aid them in their work.

Cultural Differences--Changes Brought about by Man

The differences	The reason	The result
Plantations	Other areas of the world need specialized tropical crops in great abundance.	Sugar cane plantations Tea plantations Rubber plantations Coffee plantations
"Cash" Crops	Private farmers grow specialized crops for world trade.	Coconuts, cinchona, coffee, and rubber are grown
Rice Farming	The Malays brought the idea of rice cultivation with them when they settled. The climate is ideal for growing this cereal grain. It provides a more dependable food supply.	Much of the land is cleared, terraced, and diked in order to grow rice.
Mining and Smelting	Valuable minerals in the area are mined and processed near the source.	Tin smelters, oil refineries, iron, manganese, and tungsten mines.
Manufacturing and Processing	Many of the crops and raw materials need processing to get them ready for shipment. Some manufacturing is located near the raw material source.	Tea, sugar cane, cinchona bark, and rubber are processed. Auto tires, cigarettes, and soap are made.
International Trade	The strategic location and the abundance of tropical raw materials and minerals, plus the market created by a large population, make this a valuable trade area.	Large shipping ports have grown up. Singapore, Jakarta, Rangoon, Manila.
Self-Government	After World War II, there was a general movement in this area for self-government.	New countries were created: Republic of India, Republic of Indonesia, and The Philippines.

In this chapter you can also demonstrate how closely the peoples of the world depend upon one another. The following question will get your students searching for evidence:

(See next page)

Primary Objective:
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.

→

Major Question #2:
In what ways does the world depend on the Asiatic rainforest? How are the people of the rainforest dependent on the rest of the world?

Rainforest Exports

What we need from them	
Rubber	To make auto tires, overshoes erasers, rubber bands, electrical insulation, etc.
Copra	To make soap and cooking oils
Tobacco	To mix with other tobacco for cigarettes and pipe mixtures
Tea	As a beverage
Sugar cane	To refine for sugar and syrup
Tin	For coating "tin cans"
Oil	Gasoline, fuel oil, grease, etc.
Manganese	To make steel
Tungsten	To harden steel, to make light bulb filaments and spark plugs
Cinchona & other medical raw materials	To make quinine and other medicines

Rainforest Imports

What they need from us	
Cotton goods	To make clothing
Machinery	For their manufacturing and processing plants
Iron & Steel	For construction and general use
Vehicles	For transportation and travel
Dairy and meat products	Because they have few domestic animals
Oils	To supplement their own supply
Fertilizer	To keep the soil fit for production
Paper	Because they make little paper
Wheat flour	Because they grow no wheat
Sugar	After sugar cane is processed into sugar, some of it is sold back to the people.

SUGGESTIONS FOR TEACHING

In guiding your students in their search for answers to the Major Questions, you may wish to employ some of the techniques suggested for previous chapters. They can easily be adapted for use with Chapter 3. You may wish to have a picture observation, or to make a map, or assign committee work in connection with this chapter.

Arousing Interest in the Chapter. Several techniques can be used to direct your students' thinking to the Asiatic rainforest. You may want to try one of the following methods.

1. Start a class period by stating that you are now going to visit another rainforest area, one that influences the life of every member of your class almost every day. Ask your students to write their names on a sheet of paper and then erase them with their pencil erasers. Point out that they have just depended on the Asiatic rainforest. Next, ask the class to mention some canned food that they have eaten recently. Point out that they were depending on this region. Did anyone put sugar on his cereal this morning? Point out that they, too, depended on this region. Continue the discussion by asking questions that deal with your students' use of oil, light bulb filaments, steel products, soap, and tea.

After many questions have been asked and the students are beginning to see that each of them is dependent upon something from this area, restate your questions and discuss the answers. Finally, direct the discussion to the question, "What area of the world produces the raw materials for these products?" (See chart above for list of raw materials and products.)

2. Interest might also be gained by discussing with your class the voyage of Columbus, the reasons for his voyage, and why he sailed west to get to the East. You can point out that today, almost 500 years later, people still depend on the riches of Asia.

3. You might also ask your class to study and compare the pictures on pp. 79-88 with the pictures in Chapters 1 and 2. Have your students list all the differences they can find. By asking, "Why do you think these differences exist?", you can discover what your students already know about the Asiatic rainforest.

Let's Look at Maps (pp. 80-81). After reading and discussing the chapter introduction on pp. 79-80, your class will need to be guided in their map study on pp. 80-81. In this map exercise, previously learned map skills are reviewed and new skills are introduced. The geographic terms that you will want to stress include peninsula and topography.

Map Skills

Skills	Review	New
Direction	N, S, E, W Latitude	
Distance	Scale: recognition of differences	
Location	Latitude Equator	
Symbols	Coastline, ocean, political boundaries, cities, rivers, continents	Islands, mountains, peninsula, political boundaries of island groups
Legend	Hatching to indicate rainforest Shading to indicate differences in population density and rainfall Precipitation in inches Shading to indicate elevation; elevation in feet	Shading to indicate number of people per square mile
Comparison & inference	Latitudes of 3 areas compared	Comparison of land forms Comparison of altitudes Comparison of topography Identification of islands by comparison with second map Inference about importance of seaport cities

Suggested Answers for Map Study

1. The Republic of India, Pakistan, Burma, Thailand, Indo-China, and Malaya on the Asian mainland have tropical rainforests. Part of Thailand is on the Malay Peninsula.

2. The land is different from the rainforest areas of South America and Africa because it consists of a number of islands and not river basins.

3. - 6. Require no answers.

7. All of the elevations listed in the legend are represented: 0-1,000', 1,000' to 3,000', 3,000' to 6,000', 6,000' to 10,000', and over 15,000'. Amazonia's elevation is much lower than most of the islands, and there are no mountains. The Congo is between 1,000' and 3,000' and the changes in elevation are not as rapid as those found in the East Indies.

8. "Heavy" is the best word to describe the rainfall in the Asiatic rainforest. On Java, the population density is over 250 people per square mile. On Borneo and New Guinea, the density ranges from less than 2 to 25 people per square mile.

9. Requires no answer.

The last paragraph on p. 81 furnishes you with two problems, made evident in the map study, which your class might investigate and answer as they read the chapter. (1) What are the reasons for the great differences in population density? (2) Why are cities such as Singapore, Manila, Jakarta, and Rangoon so important?

Use of Statistics--Tables and Maps. Statistics frighten most people, and your students are probably no exceptions. You will need to show your students how statistics can help them in their study of geography. You will need to teach them how to use factual data on tables and maps to raise or to answer questions.

You might have your students prepare a blank form similar to the one shown here. (The stars beside the questions indicate which group of students--reluctant, average, advanced--should be able to cope with the questions. All groups should start with question #1.) This type of lesson requires the use of tables, interpretation of maps, recall of previous information, and some use of mathematics. If your classes have not yet studied percentage in their arithmetic class, you can explain it simply: per cent means part of 100. (For example, "27% of the population in Brazil lives in the rainforest" means that 27 out of every 100 people in Brazil live in the rainforest

Question	Reference Pages	American rainforest Brazil	African rainforest Belgian Congo	Asian rainforest Rep. of Indonesia
*1. What are the elevations of the rainforest areas in these countries?	418-419	0'-1000'	0'-3000'	0'-10,000
*2. What is their rainfall?	414-415	40" to over 80"	40" - 80"	40" to over 80"
*3. What is the topography of the rainforest region in these countries?	Recall of previous information	river basin	river basin	mountainous islands
*4. What is the density of the population per sq. mile in the rainforest region of each country?	416-417	less than 2 - 25	less than 2 - 125	less than 2 - over 250
*5. How large is the country in sq. miles?	428,444, 440	3,268,027	904,974	735,000
*6. What percentage of the country is rainforest?	428,444, 440	38%	77%	91%
*7. What is the total population of the country?	428,444, 440	52,645,479	10,389,155	60,777,233
*8. What percentage of the population lives in the rainforest?	428,444, 440	27%	66%	73%
**9. What is the actual area of the rainforest in each country?		.38 x 3,268,027= 1,241,850 sq. miles	.77 x 904,974= 696,829 sq. miles	.91 x 735,000= 668,850 sq. miles
**10. What is the actual population of the rainforest area in each country?		.27 x 52,645,479= 14,214,279	.66 x 10,389,155= 6,856,842	.73 x 60,777,233= 44,367,380
***11. What is the density of population per sq. mile in the rainforest of each country?		14,214,279 ÷ 1,241,850= approx. 11	6,856,842 ÷ 696,829= approx. 10	44,367,380 ÷ 668,850= approx. 66
**12. What is the population of these cities?	460	Manaus and Belém (not listed)	Leopoldville Stanleyville (not listed)	Jakarta: 2,800,000 Surabaya: 714,898

The fact that four of the cities in the chart are not listed in the table on p. 460 may cause concern among some of your students. You can explain to them that the cities are too small to be listed on a short population table. That is just the point you want to make. You might want to have an ***advanced student look up the population of these four cities in an up-to-date atlas.

Filling in the answers on the chart gives your students practice in looking up facts. But the facts should be used merely as means to an end--the facts should be interpreted and used in forming conclusions and generalizations. The questions on the next page will help your students form some generalizations.

*1. Which country has the highest land? (Rep. of Indonesia)
*2. Which country has a different type of topography? (Rep. of Indonesia)
*3. Which country has the heaviest rainfall? (all heavy, but in Belgian Congo a little less)
*4. What type climate is common to all three countries? (tropical rainforest)
*5. Which country has the greatest total population? (Rep. of Indonesia)
**6. Which area has the biggest differences in elevation? (Rep. of Indonesia)
**7. Which country has the largest rainforest area? (Brazil)
**8. Which country has the largest population living in the rainforest? (Rep. of Indonesia)
**9. Which area has the largest cities? (Rep. of Indonesia)
***10. Which area has the highest density of population per square mile? (Rep. of Indonesia)

Generalization: Even though many things are similar in these rainforest areas, there is one outstanding difference: More people live in the Republic of Indonesia. You might say to your students, "Why do you think this is so? How do these people make their livings? How do we depend on them? Let's read to find out."

Reading about the Asiatic Rainforest (pp. 82-88). To help your students find answers in the reading material on pp. 82-88, you may want to have them fill in charts similar to those shown on pp. 24-25 of this booklet.

The *reluctant students can locate most of the differences and the results of those differences in the Asiatic rainforest. The last two items (international trade and self-government) in the first chart may be a little too difficult for them to get on their own. In the second chart, they should be able to find the things that we need which come from the Asiatic rainforest and some of the uses to which these things can be put.

The **average students should be able to develop the first chart fairly completely. Some of the reasons may give them difficulty, but they should be able to suggest some related general ideas. In the second chart, they should be able to develop completely the rainforest exports and their uses. They will probably be able to think of many more uses, and you can encourage them to put down as many as they can. When filling in the rainforest imports, the **average students should be able to think of the types of imports even though they do not know any specific items or their uses.

The ***advanced students can fill in the first chart completely and may even add some other listings of their own. The second chart will give them more difficulty because they will need to do additional research to find some of the imports, and why they are imported. But with the help of reference books, they should be able to make long lists of uses for rubber, manganese, tin, and tungsten.

SUGGESTED ANSWERS FOR CHAPTER 3

"Checking Up", p. 83

1. The Asiatic rainforest is like the rainforest areas in South America and Africa because it has heavy rainfall, high temperatures, and high humidity. In many places, there is the same type of dense forest. The differences include topography, mixture of people, and huge population.

2. The Asiatic rainforest has been invaded many times by groups of people speaking many different languages. Each group was shut off by the mountains and valleys and could not exchange talk or customs with other groups. Gradually, these isolated groups changed or invented new words. For these reasons, different languages are still spoken today.

3. European countries set up colonies because of their need for the rich tropical raw materials and trade of the Asiatic rainforest.

"Checking Up", p. 86

1. The sago palm and the coconut palm are valuable trees in the Asiatic rainforest. The starchy pith of the sago palm is used to make bread. The coconut palm has many uses. People drink the coconut "milk" or eat the meat. The dried coconut meat, called copra, is crushed to give out an oil used for cooking and fuel. The leaves are used as matting material. The roots are used as medicine. The hard inner coconut shell is used for household utensils. The trunk is used for building material, and the bark is used for tanning material.

2. The Asiatic rainforest tribes make their livings by hunting, fishing, collecting forest products, and farming.

3. Rice farming needs a warm, wet climate. The rice farmer must prepare his field and plant the young rice seedlings in the mud. Six or more inches of water are held in the field and regulated by small dikes. After the grain is fully grown, the fields are drained, and the rice is cut and threshed. The rice farmers' cash crops include sugar cane, coffee, coconuts, and rubber.

"Checking Up", p. 88

1. Help of European and American businessmen was needed to start plantations because setting up and operating plantations takes a great deal of money. Money is needed to pay the workers and to pay for equipment and buildings. Sometimes it takes several years before the plantation begins to produce crops that can be sold. Some of the plantation crops are rubber, coconuts, tobacco, coffee, tea, sugar cane, and cinchona.

2. Tin, iron ore, manganese, and tungsten are found in the Asiatic rainforests. There are also many valuable oil deposits.

3. Factories that prepare raw materials for shipment are becoming important in the Asiatic rainforest. Some of these include oil refineries and smelters, and factories for preparing tea, sugar cane, cinchona bark, tobacco, and rubber. In some places there are also processing plants that make finished products, such as automobile tires, cigarettes, and soap.

"Checking Up", p. 88

1. Singapore is called the Crossroads of the East because it is located on the Strait of Malacca, through which pass the main steamship routes from Europe to China and Japan. People from all over the world stop at this important trade center. Indonesia's great trading center is Jakarta, located on the northwest coast of Java. Both cities are busy collecting and shipping centers because their locations make them easily accessible to ocean-going vessels.

2. The leading trade center of the Philippines is Manila. In World War II, American troops were forced to withdraw from the city by the Japanese, but in 1944 they returned when they drove the Japanese from the islands.

"Questions to Think About", p. 89

1. Although some of the Asiatic rainforest people farm like the people of Amazonia and the Congo, there are striking differences in farming methods. Large plantations employing many workers produce huge crops of rubber, coconuts, tobacco, coffee, tea, sugar cane, and cinchona. Some of these crops are also grown by individual farmers on their own land. Still another kind of farming is carried on by the Malays. These people are rice farmers and produce huge crops, especially on the island of Java, where the soil is very rich because the land is covered by volcanic ash. The rice farmers clear the land, level the fields, and use domestic animals, such as the carabao, for plowing. The fields are flooded by means of dikes built of earth. Many of the farmers also grow cash crops, such as sugar cane, coffee, coconuts, and rubber after the rice has been harvested.

2. The Asiatic rainforest farmer must move his garden every so often because the soil is worn out after two or three crops. When all the good land near a village has been used up, the entire village must be moved to a different part of the rainforest.

3. In the Asiatic rainforest, unlike the rainforests of Amazonia and the Congo, farmers use domestic animals, such as the carabao, for plowing the fields and hauling carts and wagons. In the rainforests of Amazonia and the Congo, such animals cannot live because conditions are too unhealthy and there is little grass or grain for such animals to feed on.

4. The Javanese farmers can use the same field for two or more crops in one year because the growing season is 365 days long, and there is plenty of rainfall and sunshine throughout the year.

5. The people of Java work early in the morning and then again late in the day, but not during mid-afternoon. During the afternoon the people stay in their houses to seek shelter from the daily rain.

6. The Asiatic rainforests are important in international trade because they are very rich in tropical raw materials and minerals needed by other people of the world. The rainforests are located near ocean trade routes, and products can easily be shipped to other parts of the world. The dense population of some parts of the rainforest also creates a large market for manufactured goods, produced elsewhere in the world. In international trade, then, there is an exchange of manufactured goods for the raw materials and minerals of the rainforest.

"We and They", p. 89

1. We use copra for soap and shortening; rubber for automobile tires, erasers, balls, overshoes, etc.; tobacco for making cigarettes and pipe mixtures; coffee and tea as beverages; sugar cane for sugar and syrup; cinchona for medicine; oil for gasoline, paraffin, and fuel oil; tin for coating steel cans; and manganese and tungsten in the manufacture of steel.

2, 3. Answers depend on conditions in your local community. You might have your students observe farming methods and crops, as well as manufacturing, in your community and ask them to compare their findings with farming and manufacturing in the Asiatic rainforests.

EVALUATION EXERCISES

To Check the Students' Knowledge of the Factual Information

Directions: Pay for your transportation from one place to the other by answering these questions.

Let's Take a Trip

From home to airport	1. What do we call land that is built up at a river's mouth? (delta)
Airport to Singapore	2. What is the term that means the "appearance of the earth's surface"? (topography)
Singapore to Sumatra	3. What formed many of the mountains on Indonesia? (volcanoes)
Sumatra to Jakarta	4. Who previously owned the islands of Indonesia? (The Netherlands)
Jakarta to Rangoon	5. What tree contains material that is used to make bread? (sago palm)
Rangoon to airport	6. What is dried coconut meat called? (copra)
Airport to home	7. What is the term for crops that a farmer grows to sell? (cash crops)

To Check Your Students' Understanding of Interdependence

Directions: In the list of articles below, check those items whose raw materials might have come from the Asiatic rainforests.

x spark plugs
school books
x shampoo
olive oil
butter
x canned food
dresses
x auto tires
x quinine
x tea
dates
x overshoes
x molasses
cheese
x light bulbs
x erasers
x motor oil
x cooking oil
suits
bricks

To Check on Students' Understanding of Advantages and Changes in Natural Environment

Directions: Put the letter T next to the number of any statement that is true. In any statement that is false, change the words in the sentence to make it true.

1. Usually, many different crops are grown on one plantation. (F, one crop is)
2. Some minerals are processed before they are shipped. (T)
3. Farming is of little importance in the Asiatic rainforest. (F, farming is still very important)
4. There are few large cities in the Asiatic rainforest. (F, many)
5. Manufacturing is increasing in the Asiatic rainforest. (T)
6. Much of the land area of the Asiatic rainforest is cleared. (T)
7. Farmers eat their cash crops. (F, sell)
8. Volcanic soil is usually rich. (T)

To See If Your Students Can Compare the Various Rainforest Areas

Directions: If you saw each of the things listed below, could you tell in which rainforest you were in each case?

1.	An Indian eating manioc	(S.Am.)
2.	A farmer planting rice ✓	(Asian)
3.	A tapir in the water	(S.Am.)
4.	A pygmy shooting a monkey ✓	(African)
5.	A smoking volcano ✓	(Asian)
6.	An oil refinery	(Asian)
7.	A floating dock	(S.Am.)
8.	A cigarette plant	(Asian)
9.	A loaf of sago bread	(Asian)
10.	A cinchona plantation	(Asian)
11.	A banana plantation	(Am.)
12.	A man driving a carabao	(Asian)
13.	A woman making palm oil ✓	(African)
14.	A girl picking ✓ tea	(Asian)

STUDENT READING LIST FOR CHAPTER 3

NON-FICTION

**DeLeeuw, C., Dutch East Indies and the Philippines, Holiday, 1943. This book contains information relating to the people, land, history, and products of the islands.

**Hart, D., & Wilson, H., The Philippines, American, 1946. This is an account of the ways of life of 17 million Filipinos before and after World War II.

**Lewis, W., Islands of the Western Pacific, Macmillan, 1950. Coral sand, palm trees, and coconuts are a very important part of life on the many islands in the Pacific.

*O'Neill, H., The Picture Story of the Philippines, McKay, 1948. This is a review of the history and the story of everyday living in the Philippines.

FICTION

**Bryant, C., Lost Kingdom, Messner, 1951. Rodmika, a Hindu boy, and his brothers search for a lost kingdom which leads them to an English boy lost in the jungle.

*Lindquist, W., Burma Boy, Whittlesey, 1953. A boy's love for the mighty elephant, Majda Koom, leads him on a long and agonizing search.

**Mukerji, D., Ghond, The Hunter, Dutton, 1928. Ghond, an Indian boy of high caste, has exciting experiences with the snakes and tigers of the Indian jungle.

*Mukerji, D., Hari, The Jungle Lad, Dutton, 1924. Hari finds the lost elephant, Kari, which brings him unexpected good fortune.

*Mukerji, D., Kari, The Elephant, Dutton, 1924. This story proves that even an elephant can have plenty of adventure.

*Sperry, A., Call It Courage, Macmillan, 1940. Mafatu fears the sea even though he lives on a small island and is the son of the chief. He tries to conquer his fear by embarking on a solitary voyage.

**Sperry, A., Rainforest, Macmillan, 1947. Chad Powell is captured by natives before he meets his father, a noted ornithologist, in the New Guinea rainforest.

**Williams, J., Bandoola, Doubleday, 1954. Bandoola, a captive and trained elephant, does his share in fighting the Japanese during World War II.

AUTOBIOGRAPHY

**Keith, A., Land Below the Wind, Little, 1939. An American girl marries a Britisher in the government service and leaves home for an entirely different life in North Borneo.

**Keith, A., White Man Returns, Little, 1951. Forced to leave her home in Borneo during World War II, the author returns to find it still full of adventure and excitement.

**Williams, J., Elephant Bill, Doubleday, 1950. This is a true story about the amazing powers of the elephants in the jungles of Burma.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 3

Borneo--Wildman's Land, 1942 (mp, b&w, sound, 11 min, #13). Travelogue on Borneo, home of famous headhunters. Shows festivals and native dances as well as the life of the orangutan.

Class Studies Rubber (fs, b&w, 48 fr, #28). A 7th grade class studies a unit on rubber. Emphasis is placed on how rubber is made and some of its uses. (Filmstrip may be retained permanently.)

Conquering the Jungle, 1939 (mp, b&w, sound, 12 min, #32). Shows the preparation of the jungles of Sumatra for planting rubber trees; also the tapping of trees and preparing latex for shipment.

Filippino Farmers, 1942 (mp, b&w, sound, 10 min, #10). Life and customs of the people of Luzon. Shows the cultivation of rice in the wet lowlands.

How We Get Our Rubber, 1950 (fs, b&w, 44 fr, #69). Pictures the rubber tree belt, how trees are tapped and rubber is processed for shipment and used.

Java and Sumatra, 1943 (fs, b&w, 55 fr, #12). Typical scenes of towns, cities, landscape, and native life on these islands of Indonesia.

Jungles of the World, 1941 (mp, b&w, sound, 11 min, #42). A comparison, pointing out the similarities among the jungles of South America, Central Africa, Burma, and the East Indies. This is a good film for a review.

Koko of the Philippines, 1951 (fs, b&w, 45 fr, #69). Life of Koko, a young Filipino boy, who lives near the rice fields on the island of Leyte.

Malay Peninsula, 1948 (mp, b&w, sound 10 min, #20). Intermingling of East and West. Primitive methods and modern techniques combine in producing the products for the rest of the world.

Nomads of the Jungle (Malaya), 1948 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 53 fr, #65). Creates the illusion of actual presence in a Malayan jungle. A family plans its life, meets its needs and problems in relation to climate, environment, and natural resources.

Study of a World Port (Singapore), 1949 (mp, b&w, sound, 12 min, #65) and 1955 (fs, b&w, 45 fr, #65). Natural conditions, native products, trade, and transportation in this British colony are a vital factor to the life in southeast Asia.

Tin from the Malayan Jungle, 1947 (mp, b&w, sound, 11 min, #35). Shows the mining of tin from the richest deposits in Malaya.

Tropical Mountain Island (Java), 1948 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). A tropical land, its fertility constantly replenished by volcanic ash, provides abundantly for a large population.

REVIEWING UNIT ONE

PLANNING THE REVIEW

In studying the text, pictures, and maps in Chapters 1-3, and in doing projects and activities connected with the various chapters, your students have learned many different facts and important ideas about the tropical rainforests of the world. All of these facts and ideas contribute to their understanding of the rainforest peoples, how they live, and why they live as they do. In order to get a clear picture of life in the tropical rainforests, your students will now need to add up the facts and sort out the most important ideas. You can help them to organize what they have learned by reviewing with them the unit as a whole.

Pages 89-90 of the textbook offer some suggestions for this review. The "Broader View" beginning on p. 89 discusses the possibility of future development of rainforest areas and draws together the many disadvantages that are encountered in the rainforest environment. Broad general understandings and relationships are brought out by the "Questions to Think About" on p. 90. In order to answer these questions, your students will need to recall and add up information learned in Chapters 1-3. Finally, in "Your Geography Workshop" on p. 90, you will find ideas for project work. The suggestions may be followed exactly as stated, or they may be adapted to apply to a specific chapter in the unit or to all of the chapters.

ADDING UP IDEAS

As you guide your class in their review, you might have them recall information that applies to the rainforest environment in general and to all the peoples of the rainforest regions. This information might include some of the following ideas:

1. The tropical rainforest climate is found in lands located on or near the equator.

2. The average annual rainfall in the tropical rainforest is fifty inches or more. The average monthly temperatures throughout the year are usually between 75° and 80°. The humidity is high.

3. Most rainforest soils are poor because the heavy rains dissolve important mineral plant foods.

4. The tropical rainforests contain many valuable products needed by the United States and other industrial nations.

5. The native peoples of the world's tropical rainforests have adapted their ways of living to the heat, humidity, rain, and dense forest by building their homes of forest materials, often several feet above the ground, and with sloping roofs; by wearing little clothing; by using the streams and rivers as highways; and by raising their food in small cleared patches in the forest. (Only in a few areas are the people settled farmers. These are mostly rice farmers.) The people have little meat in their diet, using as their chief foods manioc, yams, bananas, sago, and rice.

As your students recall important information, have them pay special attention to the problems of the rainforest people. These problems might be listed on the board. Then, to lead your students into the "Broader View" you might ask, "Do these problems have to exist? Can anything be done about them?" To find answers, you may want all of your students to read the "Broader View", stopping occasionally to discuss with them the ideas contained in it. Or, if you prefer, you might have your ***advanced students read this section and report on it to the rest of the class.

After the reading, the **average and ***advanced students can then tackle the "Questions to Think About" on p. 90. Allow time for thought organization, and then discuss the questions orally.

SUGGESTED ANSWERS FOR "QUESTIONS TO THINK ABOUT", p. 90

1. The major problems of people who live in the rainforests are those involving travel, transportation, getting food, disease, insects, poor soil, and adverse climate.

2. We depend on the people of the rainforest for many things we use every day. (Examples in the charts on pp. 4 and 25 and in the answers on p. 20 of this booklet.) In many cases, their success in solving their problems is our success also.

3. New medicine, more money, and scientific research are helping to make the rainforest a healthier and better place in which to live. Plantation farming, self-government, advances in agriculture, in transportation, communication, and education are some of the changes.

4. The climate causes the soil to wear out very quickly because the heavy rainfall washes away the minerals necessary for plant growth. Only certain kinds of plants can grow in the hot, wet climate. In most places, the farmer must shift his farm or garden every few years.

5. Most of the people build their homes with materials which are close at hand (forest products). Many of the houses are built on stilts to keep them off the damp ground. They have sloping roofs to shed the heavy rainfall.

6. The chart on p. 25 of this booklet lists some of these products.

WORKSHOP ACTIVITIES

Workshop activities are valuable learning devices for a review lesson. Some suggestions for projects were given previously in this booklet in connection with the various chapters. Others are listed in "Your Geography Workshop" on p. 90 of the textbook. Here are a few additional ideas to supplement those listed on p. 90.

1. Build models representative of homes found in the world's rainforests.

2. Make a blowgun, a model of a dugout canoe, a native drum, models of native pottery, or some other model specimen of native handicraft to give to the Museum Committee.

3. Make a salt and flour map of the Amazon basin. Show only the largest tributaries.

4. Make a collection of pictures of birds and animals in the rainforests.

5. Write a composition explaining one of these statements: (1) The tropical rainforests are poorly ventilated. (2) When an automobile tire plant in the United States goes on strike, people in Malaya go hungry.

EVALUATING THE UNIT

In your evaluation, you will want to measure how far your class has gone in acquiring the skills, factual information, and attitudes needed to answer the Major Questions and other questions about the chapters, and how much progress has been made in reaching the Primary Objectives.

There are many ways to plan your evaluation for this unit. You might wish to construct tests based on the reading material as well as the pictures and maps in the various chapters in the textbook. You might also wish to select for your method of evaluation some of the suggestions, Major Questions, or Evaluation Exercises in this booklet.

See also Unit Test One in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

TEACHING UNIT TWO: HALF WET, HALF DRY

BOOKLET #4

Your Own Look Ahead 1
Ch. 4: Big Game and Tall Grass . . 2
Ch. 5: Lands of Many Villages . . 13
Feature: Coffee Growers
and Cowboys 22
Feature: A Hard and Lonely Land. . 24
Reviewing Unit Two. 25

YOUR OWN LOOK AHEAD INTO UNIT TWO

In Unit One, your students visited lands where it rains almost every day and where people must cope with high heat and humidity the year round. In Unit Three, they will study lands where it hardly ever rains or where rainfall is very irregular. In this unit, they will visit lands where it rains almost every day for six months of the year and where there is practically no rain at all for the other six months. These lands are the tropical grasslands of the world, sometimes called the tropical savannas. Because they cover large areas of five continents, they contain many different people who make their livings in many different ways. They are lands of contrast--of ancient customs and of modern advances in government, education, and methods of agriculture. Some of their peoples are at present struggling to improve their standard of living and to gain recognition on the world scene.

As your students study this unit, they will see that the grassland people, like those of the rainforests, live as they do largely because of the existing environment with its alternate wet and dry seasons. Your class will observe how the grassland people use the natural resources that are available and how they produce many things that are needed by people in other regions of the world. They will learn that these other regions, in turn, contribute many necessities to the inhabitants of the tropical grasslands.

The following diagram lists some Major Questions that you might want to raise as your students study the chapters and "Features" of this unit. Each of the questions is related to one of the Primary Objectives of world geography. Detailed answers and suggestions for handling the questions will be given later in this booklet.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. Generalization: In some grassland areas the conditions are so unfavorable that few people can live and little is produced.	Feature (pp.121-123), Question #1 Why do the Australian grasslands produce so little?
Objective: To show the interrelationship between man and his natural environment, and how man has learned to change, control, and direct his surroundings. Generalization: The people of the grasslands must adapt their way of living to alternate wet and dry seasons.	Chapter 4, Question #1 How have the people of the African grasslands adapted their lives to heat and to the alternating wet and dry seasons? Chapter 5, Question #1 Why are the monsoons so important to India's prosperity?
Objective: To teach the value of natural resources and the need for making better use of them through conservation. Generalization: Mineral resources are valuable to many of the grassland areas.	Chapter 4, Question #2 In what ways have living patterns been changed in some areas because mineral resources are present?
Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples. Generalization: Many products which are grown or mined in grassland areas are valuable to the rest of the world.	Chapter 5, Question #2 How do the people of India depend on the people of southeast Asia? Feature (pp.115-121), Question #1 What products does the world get from the American grasslands?

AROUSING INTEREST IN THE UNIT

As your class prepares to study this unit, you might first want to explain to them why large areas of the world have the tropical grassland climate. You might introduce the lesson by writing on the board, "Lands of Alternate Feast and Famine for Man and Beast." Ask someone in the class to define "feast" and "famine". Then have the class look at the title of the unit on p. 91 to see if they can get any ideas about the meaning of the statement on the board. They will probably be able to see a relationship: when it is wet, there is plenty to eat; and when it is dry, there is a shortage of food. The first four paragraphs on p. 91 could then be read by the class. Remind your students to refer to the maps on p. 91 and pp. 422-23, which show where the grasslands are located.

With **average and ***advanced students, you might want to consider the questions as to why the rainy season comes in the summer and the dry season comes in the winter. (The rains follow the direct rays of the sun.) When the answer to these questions has been established, they will then be able to understand why the grasslands that are south of the equator have the rainy season during different months of the year than those areas that are north of the equator.

Next, you might ask the class why the tropical grasslands have few trees instead of dense forests. You may have to point out to them that there is enough rainfall to permit grass to grow but not enough moisture to enable large trees to exist.

The class could then read the rest of the unit introduction which describes the wet and dry seasons. The last paragraph gives a preview of the places they will visit in the unit. The "Climate Facts" for Bombay in the Republic of India, on p.92, are typical of the grassland climate. Your students might compare the data with climate facts of your local community.

CHAPTER 4: BIG GAME AND TALL GRASS

YOUR OWN LOOK AHEAD INTO CHAPTER 4

Most students picture the grasslands of Africa as an area where packs of carniverous animals follow huge herds of grazing animals across the plains and plateaus. Few realize that there are also hundreds of thousands of human inhabitants in the grasslands, European as well as native, who make their living from the earth. Some of these people are farmers, some are herdsmen, while others go deep below the surface of the earth to dig for valuable and precious minerals. Your students may be surprised to learn that today most of the roving, wild animals are concentrated on huge game preserves similar to those in our national parks.

Like the people of the rainforests, the people of the African grasslands are also thinking about independence and self-government. Sometimes these thoughts are manifested in demonstrations of violence, such as the Mau Mau revolt in east Africa, or in the hard feelings between the Africans and Europeans in the Union of South Africa.

In Chapter 4, your students will visit some of the people of the African grasslands to see how they live and how they have adapted their lives to alternate seasons of rain and drought. To help your students in their reading, the chapter has been divided into several sections.

1. "Let's Look at Maps", pp. 94-95.

2. "The Tropical Grasslands of Africa", pp. 96-97, describes the vegetation of the grasslands and explains how it is suited to the alternating wet and dry seasons. It tells what kind of plant-eating animals make their homes in these areas and how meat-eating animals can survive there.

3. "Farmers and Farming Villages", pp. 97-99, tells how the Hausa, a farming people of the grasslands, have learned to conserve water during the wet season for use during the dry part of the year and how they have learned to prevent soil erosion.

4. "Herdsmen of the Tropical Grasslands", pp. 99-101, describes life among the nomadic Masai of east Africa, who make their living from the natural grass vegetation by grazing herds of cattle.

5. "The Tropical Grasslands of South Africa", pp. 101-102, shows how the presence of minerals has influenced life in the southern grasslands and how it may explain the wide mixture of people in this part of Africa.

. . . .

FOR YOUR OWN READING

The following books may interest you and provide you with additional background material on Africa.

J. A. Hunter, Hunter, Ch. 4, 6, 7.
L. Dudley Stamp, Africa: A Study in Tropical Agriculture, Ch. 14, "The Sudan"; Ch. 17, "East Africa"; Ch. 18, "Central Africa and the Southern Savanna Lands".
Richard U. Light, Focus on Africa, Ch. IV, VI, and VII.

. . . .

MAJOR QUESTIONS

In your lessons on "Big Game and Tall Grass", you may want to emphasize some Major Questions that focus attention on the chapter text. As in previous chapters, you might use the questions during the motivation, information-gathering, organization, or evaluation phase of learning. The information that answers these Major Questions is given below in chart form.

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

→

Major Question #1:
How have the people of the African grasslands adapted their lives to heat and to alternating wet and dry seasons?

Practice	Adaptation	Reason
Occupation: Farming	Crops planted at the beginning of the wet season.	Farmers want to take advantage of all the rainfall.
	Grow wheat and millet.	Both crops can withstand some dry weather.
	Grow guinea corn.	Stored for food and then used during the dry season. Stalks are used as building material.
	Build ridges and hollows in the fields.	The ridges and hollows prevent rainwater and topsoil from running off during the wet season. The water soaks into the ground and is thus available in the dry season.
Occupation: Grazing	The herding people are nomadic.	Herds are moved to find the best pasture land.
	Special breed of cattle.	These cattle have a storage of fat in their humps which supplies nourishment when food is scarce during the dry season.
Housing	Many houses are made of mud.	The mud huts keep cool in the hot climate.
	Houses have thatched roofs.	The straw roof sheds water very quickly.
	Many villages are fenced.	The fences keep cattle in and wild animals out.
Food	The Hausa people eat mainly vegetables.	These people grow vegetables and cereal grains.
	The Fulani and Masai eat milk, meat, and cheese.	These people are herders and live almost entirely by herding.

Primary Objective:
To teach the value of natural resources and the need for making better use of them through conservation.

→

Major Question #2:
In what ways have living patterns been changed in some areas because mineral resources are present?

Minerals	Changes in Patterns of Living
Katanga Upland Copper Uranium	Many Europeans have settled in these regions since the discovery of minerals.
Northern Rhodesia Copper Vanadium Zinc	Many cities and large towns have sprung up, such as Johannesburg, Salisbury, Bulawayo, and Elizabethville. Some of these towns and cities are similar to the mining towns and cities in the western part of the U.S.
Southern Rhodesia Gold Chromite	Manufacturing has developed, and most of it is related to the mining industry.
Transvaal Diamonds Gold Copper Platinum Iron Coal Tin	Thousands of native Bantu have left their villages to work in the mines or on plantations run by Europeans. Many of the Bantu natives now live in the cities and towns. Railroads have been built connecting the mining areas to the seacoast. There are fewer nomadic herdsmen and fewer small farmers in these areas.

SUGGESTIONS FOR TEACHING

As you begin to teach the important ideas implied by the Major Questions for this chapter, you may wish to use again any of the teaching methods that you have found successful in previous chapters. Several new suggestions are included in the pages that follow.

Arousing Interest in the Chapter. There are many ways in which you can introduce this chapter. One that will fire the imagination of most students takes advantage of their previous interest in "big game" and "white hunters." To heighten this interest, you might want to try one of these ideas.

1. Read a true account of a white hunter in the grasslands of Africa. You may wish to use the following account of a Masai lion hunt, taken from John Hunter's autobiography Hunter, published by Harper & Brothers, 1954.

"The Masai believe that the bravest act a man can perform is to grab a lion by the tail and hold the animal so the other warriors can close in with their spears...

"I have seen several of these 'tail pullings' during Masai lion hunts and it is a wonder to me that the men attempting the feat ever come out alive. I remember one hunt in which fifty or more spearmen were involved. They had put up two lions and a lioness. The animals tried to reach some heavy scrub but the warriors cut them off . . .

"As the spearmen closed in around the thicket, they bunched together, jostling each other in their desire to be first to spill blood. The remaining two lions were clearly visible in the bush, standing shoulder to shoulder and both giving grating roars. When the moran were within ten yards of the lions, spears began to fly. One of the spears struck the lioness in the loin and she came out with a scream of rage and pain. For an instant she stood up on her hind legs, pawing the air like the crest on a coat of arms. Then she dropped to bite at the spear in her flank. At that moment, one of the moran threw down his spear and, rushing forward, grabbed her by the root of her tail. A moran never grabs a lion by the tasseled end of the tail. A lion can make his tail as stiff as a gun barrel, and a man would be swept aside by a single jerk.

"At once the moran's comrades dashed in, slashing with their simis. A moments like this, the spearmen work themselves up to a pitch of blind frenzy. They seem to be mere automatic stabbers. Their faces are expressionless. There is no teamwork; each man is out to do the killing by himself. The lioness was digging her hind feet into the ground to get purchase forward and the tail puller was dragging her back.

Suddenly the lioness went up on her hind legs, striking left and right with her paws at the men around her. Although I saw her blows go home, the men never flinched. They told me afterward that they never feel any pain at the time of a mauling--they are at too high a pitch of excitement. Apparently neither does the lion. Both sides continue to fight until one drops from loss of blood."

You might explain to your class that in the chapter they are about to study, they will find out more about the Masai people and how they make a living on the grasslands of Africa. A list of questions might be compiled about things the class would like to find out about the Masai people.

2. You may wish to show a film or filmstrip showing scenes of the game and landscape of the grasslands. This could lead into a similar list of questions about the people of the grasslands and how they make a living.

3. By using the picture on p. 93 and the ones on pp. 96-97, you might start a discussion about the animals of the grasslands. Many of your students will have seen some of these animals in the zoo, in movies, or on television programs. They will be able to give some personal descriptions of these animals. You might explain to your class that in the same parts of Africa where these animals live, there are also thousands of people who must provide a living for themselves. Perhaps the class will be interested in investigating who these people are and how they are able to live in this hot, wet-and-dry land.

After introductory remarks such as these, your students are ready to read the flight text on pp. 93-94 and to find the answer to the picture caption on p. 94.

Let's Look at Maps (pp. 94-95). The imaginary flight from Idlewild Airport to Nairobi in Kenya takes your students over some exciting territory. In the map study they have an opportunity to examine this grassland area of Africa more closely and see something of its physical make-up. Many of the map skills that were introduced earlier are reviewed and some new ones have been added.

Map Skills

	Review	New
Direction	N,S,E,W	
Distance	Recognition of differences in scale	
Location	Latitude	South Tropic Relation of two climatic areas
Symbols	Political boundaries, mountains, oceans, continent	Colonies, lakes, uplands, provinces, plateaus
Legend	Shading to indicate elevation; elevation in feet; shading to indicate differences in population density and rainfall	Hatching to indicate grassland
Comparison & Inference	Comparison of altitudes	Location of two different climatic regions compared on world map

The map study lends itself well to a full class activity. As some of your students point out things on a wall map or globe, the rest of the class can refer to the maps in the textbook. The meanings of two new geographic terms--plateau and upland--are developed in the reading material. You may want to concentrate on these words with your class.

Suggested Answers for Map Study

1. This activity requires student participation and reinforces previously learned map skills.

2. The northern belt of grasslands lies between 5°N and 15°N latitude. Some of the countries in this belt include Sierra Leone, Gold Coast, and Nigeria. Some of the colonies contain the name of the mother country, such as French West Africa and French Equatorial Africa.

3. Directions given in the text involve active student participation and practice in using new and previously learned skills.

4. Tiny strips of rainforest in South America and on the island of Madagascar extend slightly south of the South Tropic, but the grassland area in Africa extends by far the greatest distance south of this line. Parts of French Equatorial Africa, the Belgian Congo, Angola, South-West Africa, Bechuanaland, Union of South Africa, and all of Northern Rhodesia, Southern Rhodesia, Nyasaland, and Mozambique are in the southern grasslands.

5. The Nigerian plateau's elevation is from 1,000' to 6,000'.

6. The higher parts of the grasslands seem more densely populated. The lower lands have fewer people.

7. Here, your students will need to follow the directions that are furnished.

Reading About the Tropical Grasslands of Africa (pp. 96-97). As your class gets ready to read this chapter, you might want to review the types of questions that newspaper reporters ask. You will probably want your class to keep these questions in mind as they study.

Your *reluctant students may need help in developing some vocabulary skills before they begin their reading. On p. 96, words such as rolling country, dense, or evaporation might be stressed. This group of students reads best when the reading sections are kept short and when specific questions are asked that can be answered directly from the reading material. Question #2 in the "Checking Up" on p. 97 is a good example of this type of question. You will want to ask additional questions of your own.

The **average students will have little difficulty with the reading and should be able to answer the "Checking Up" questions on p. 97 with ease. You might interest this group of students in discussing topics such as plant adaptation to the wet and dry seasons and the concept of meat-eating and plant-eating animals as it applies to insects and birds.

After reading pp. 96-97 and answering the "Checking Up" questions, the ***advanced students might want to look up more information about the meat-eating and plant-eating animals. This group may also want to do additional research on plant adaptation to the wet and dry seasons.

Reviewing the Reading (pp. 97-101). The suggestions for reading given above may also be applied to the material on pp. 97-101. After students have read pp. 97-101 and answered the "Checking Up" questions, some teachers find it helpful to devote a lesson to reviewing the Hausa and the Masai people, pointing out the problems of these two grassland people and how they have tried to solve them.

All of the problems are touched on in the reading but, in reviewing the material, your students have a chance to see the various problems listed and organized. They will be able to see certain similarities between the Hausa and the Masai even though their ways of making a living are very different.

With your *reluctant students, you may want to list the problems on the board and have the students find out how the people have or have not solved the problems. **Average and ***advanced students, however, might be asked to determine the problems as well as the solutions. To do this successfully, they will have to reexamine the reading material with a critical eye. The chart may help to organize ideas.

HAUSA (pp. 97-99)

Problems	Solutions
Producing food	The Hausa are farmers.
Preventing soil erosion during the wet season Saving water for dry season	Farmer makes a series of ridges in field. These ridges are about 1-2½' high. The hollows that are formed between the ridges have cross ridges about every 20-40' to stop the flow of water. This criss-cross pattern keeps the soil from washing away and allows the water to soak into the ground, conserving it for the dry season. (See picture p. 98.)
Insect, bird, and animal control	The farmers keep a constant watch on their fields.

(Hausa, pp. 97-99, Cont.)

Problems	Solutions
Crops that grow well in wet and dry climate	The farmers plant wheat, millet, and cotton, which grow well in this climate. The farmers also grow guinea corn, sweet potatoes, peppers, tomatoes, pumpkins, beans, indigo, and peanuts.
Planting the crops at the beginning of the wet season	All the Hausa people return to their native village from wherever they might be to help plant the crops at the beginning of the rainy season.
Trading for necessities	The farmers grow a "cash"crop. The craftsmen make objects for trade, such as swords, daggers, scissors, bracelets, ornaments, boots, sandals, belts, and saddles.
Shelter from the heat and the wet season	They build their houses out of mud, which stays cool, and they make a roof of guinea corn stalks to shed the rains.
Protection from wild animals	They surround their villages with a wall made of mud or stalks of guinea corn.

MASAI (pp. 99-101)

Problems	Solutions
Providing food for cattle	They lead a nomadic life. They move their cattle from one good pasture to another.
Cattle suited to the climate	The cattle have a hump of fatty tissue on their backs that provides nourishment when food is scarce in the dry season. This breed of cattle can also survive the heat. (See picture, p.99.)
Pasture during the dry season	The Masai usually move to the upland areas during the dry season. Here there is more rainfall and the grass remains green and water is plentiful.
Pasture during the wet season	The Masai take advantage of the rain to move to lower land and let their cattle feed on the grass there.
Conservation of pasture land	There are too many cattle grazing on the land. They kill the grass and the soil washes away, destroying the grasslands. The people have done little to correct this problem.
Protection from wild animals	The women build a fence around the kraal to keep the cattle in and the animals out. Openings in the fence are closed with bunches of thorn bush.
Providing shelter	The houses are usually made of grasses, which are found in great abundance. (See picture, p. 100.)
Trade items and weapons	The Masai craftsmen make weapons and objects for trade. The hides, milk, and livestock are used for barter.

Using Audio-Visual Aids with the Reading (pp. 101-102). To enrich the learning experience and to supplement the text material, you might occasionally want to show a sound film in your classroom. While watching a film, your students can see and hear many of the things they have been studying, and often learn new and interesting information.

To be truly effective, a lesson based on audio-visual material must be well planned and thoroughly organized. The selected film should be ordered well in advance to assure its arrival on the selected date. You will also want to allow yourself time to preview the film before using it in the classroom to make sure it contains the information you wish to cover and to formulate some questions about the film.

The text on pp. 101-102 is used here as an example of reading material that can be enriched by the use of audio-visual aids. The suggested film is the "Riches of the Veldt", which is listed on p. 12 of this booklet in the audio-visual materials for Chapter 4. The general procedures proposed for this lesson could be applied to any lesson based on the combined use of text and audio-visual materials.

If you show the film after your students have studied the section about "The Tropical Grasslands of South Africa", you might want to start your lesson with a discussion about the differences between the southern grasslands and the other grassland areas of Africa. You might ask, "Why are there more Europeans, towns, cities, and railroads here?" All the answers will point to the fact that the presence of minerals has caused the difference.

Once this fact has been established, you may want to tell your class that they are going to see some of these differences in a film, but before they see it, you want them to mention some of the things they would include if they were making a film about the southern grasslands of Africa. As the items are given, they can be listed on the board. List all of the ideas, the correct as well as the incorrect. After a sufficient number of ideas have been listed, you might then write on the board a few questions for the class to answer as they watch the film. Your questions might resemble these.

*1. Who are the main characters in the film? Where do they come from? Why?

*2. What large city do you see?

**3. What language is spoken in this city? What kinds of people live there?

**4. What type of people are the miners? Where do they live?

**5. What do the people do who are not connected with mining?

***6. What evidence do you see that mining has changed the life of the people on these grasslands?

For emphasis, you might have a student read each question orally before the showing of the film.

After the film has been shown, have your students look at the list of ideas they formulated previously. As they read through the list, check off and discuss the ideas that were mentioned in the film. Then, ask the class to decide why the remaining ideas were not included in the film. (Perhaps some of the ideas did not apply to the grasslands, or perhaps some were not within the scope of the film.)

Finally, have the students answer your questions about the film. Discuss the answers in class so that any misconceptions and misunderstandings may be cleared up.

Whenever possible, it is desirable to show a film twice. Frequently, your students will see something the second time that escaped them on the first viewing. Since the film chosen here, as an example, is a twenty-minute film, it would be impossible to show it twice in the same period and still have enough time for discussion. The film could be shown again the next time you meet the class.

One method for reshowing a film involves switching off the sound. This enables you to ask questions about the action as it takes place on the screen. You might also want your students to fill in the missing dialogue.

SUGGESTED ANSWERS FOR CHAPTER 4

"Checking Up", p. 97

1. The trees of the African grasslands are adjusted to the dry season because they have narrow, fuzzy leaves, which enable the trees to hold their moisture in the dry season. Many of the trees have long roots and trunks which also hold a great deal of moisture. Broad-leafed trees, which lose too much water by evaporation, would die.

2. The plant-eating animals are the elephant, giraffe, rhinoceros, zebra, antelope, buffalo, hippotamus, and wild hog. The meat eaters include the lion, tiger, leopard, hyena, crocodile, cheetah, and many more.

3. Some of the insects of the grasslands are blood-suckers. The germs of sleeping sickness and malaria live in the blood of men and animals. When the insects suck the blood from an infected person or animal, they are able to spread the disease.

"Checking Up", p. 99

1. The alternating wet and dry seasons cause the Hausa farmer two problems. First, he must save as much water as possible for the dry season. Second, he must prevent his top soil from being washed away during the wet season. He solves these problems by his method of farming. In his fields, he builds ridges three to six feet apart. In the hollows between the ridges he constructs cross ridges, or little dams, every twenty to forty feet. These dams prevent a rapid run-off of water. The water then sinks slowly into the ground, where it is available for the dry season. The hollows catch and hold soil washed down from the ridges during rainstorms.

2. Guinea corn is the Hausa farmer's most important crop because it provides him with both food and shelter. He uses the grain for food and the stalks for roofs and fences. He also grows millet, cotton, peanuts, wheat, sweet potatoes, peppers, tomatoes, pumpkins, beans, and indigo.

3. The Hausa craftsmen make swords, daggers, scissors, knives, spurs, bangles, bracelets,wire decorations, wire ornaments, leather water bottles, saddles, boots, sandles, and belts. The craftsmen use very simple tools, such as a hammer, an anvil, a pair of bellows, and a charcoal fire.

"Checking Up", p. 101

1. The conditions that favor raising cattle in the grasslands of east Africa include the presence of a deep, flat valley which has abundant grass during the rainy season, and the higher land which provides grass during the drier season.

2. The Masai plan their work so that they graze their cattle on the floor of the deep, protected valley during the rainy season and move to the uplands and mountain slopes where the grass remains green during the dry season.

3. Erosion is a serious problem because the Masai graze too many cattle. The cattle eat the grass down to the roots and kill it. When the rainy season arrives, the water washes the soil away very quickly.

4. The Masai women build the kraal. Tiny huts, usually made of grass, are built in a great circle about 100 to 300 feet in diameter. Sometimes the kraal is surrounded by a high fence. The fence has openings which are closed at night to protect the people and cattle. The best location for the kraal is on well-drained land near a grove of trees. This location protects the village from flooding during the rainy season and provides building material for the framework of the houses and the fence. The trees also offer shade for the people and animals. The Masai also try to build the kraal near a salt lick so that their animals can eat salt.

"Checking Up", p. 102

1. The mineral resources of the southern grasslands include copper, uranium, vanadium, zinc, gold, chromite, diamonds, platinum, iron, tin, and coal. The Transvaal is the richest mineral region of all.

2. The Bantu are important to the economic life of the region because they form the chief labor supply. Besides working on the farms and plantations, they work in the cities and mines.

3. European settlers have changed the farming methods by building large, modern farms and plantations. They use power-driven farm machinery and scientific farming methods.

"Questions to Think About", p. 102

1. The tropical grasslands turn brown and the trees shed their leaves during the dry season. The air is hot and dusty without a cloud in sight. The water in the streams gets lower and lower, sometimes disappearing entirely. The roads are deep in dust. The whole area seems like a furnace.

2. When the rains come, the air clears and the rivers start to flow again with muddy water. Many times they overflow their banks and flood the land. The trees and grass begin to grow again, and the area looks green, rich, and fertile.

3. The Hausa farmer is a clever farmer because with a few simple tools he is able to grow enough crops to live comfortably. He has used his ingenuity to overcome the two huge problems of conserving water for the dry season and preventing soil erosion during the wet.

4. Mining has brought settlers, many of them Europeans, to the southern grasslands. Many cities and towns have grown up. Manufacturing has developed and railroads have been built. There are many new job opportunities for the people, and, as a result, fewer people herd cattle and farm on small plots of land.

5. Rainfall and elevation determine, to a great extent, the location of grazing lands. During the wet season, the herds can be fed on the grasses of the lower lands, but during the dry season the herds must be moved to higher land where the grass stays green.

6. The most important difference is the presence of minerals. The southern grasslands also have more towns and cities than the other grasslands of Africa. While farming and grazing are still important, they are overshadowed by the mining activities.

7. The southern grasslands have a larger European population because they are farther from the equator and have a cooler climate. Also, south Africa was easier to get to from Europe. When gold and diamonds were discovered, thousands of people were attracted to this part of Africa.

"We and They", p. 102

1. & 2. Answers to these questions are based on comparison with your local community and your students' experiences.

3. The United States imports many of Africa's minerals. Chromite is used to make stainless and special steels. The United States has no high-grade chromium ore. Uranium is used to produce radium and atomic power.

EVALUATION EXERCISES

To Check on Your Students' Understanding of Factual Information

Directions: Starting at the bottom, climb the stairs by answering each question correctly.

5. What are the Dutch descendants in south Africa called?
(Afrikaners)
4. What area in south Africa is richest in minerals?
(Transvaal)
3. In which grassland do the Masai live?
(east African)
2. What occupation do most of the Hausa follow?
(farming)
1. What is the name of the climatic region we are studying?
(tropical grasslands)

To See Whether Your Students Understand How Animals and People Live In the Hot, Wet-and-Dry Lands

Directions: Write a sentence about each word, telling how each person or thing provides a living for himself in the grasslands. Use the word in the sentence.

Giraffe	A giraffe eats the grass and leaves on the low trees.
Cheetah	The cheetah preys on the grass-eating animals.
Vultures	The bodies of the animals that have been killed or that have died are eaten by the vultures.
Hausa	The Hausa people farm to produce food.
Masai	Cattle grazing is the way the Masai produce their food.
Tsetse fly	The tsetse fly lives on the blood of the animals and men who inhabit the grasslands.

To See Whether the Members of Your Class Know the Location of Important Grassland Cities

Directions: There are several important cities on the grasslands of Africa. See if you can tell on which grassland (northern, eastern, or southern) each of the following cities is located. (**Average students might also name the country, and ***advanced students might tell why each city is important.)

City	Grassland	Country	Importance
Johannesburg	Southern	Union of South Africa	Mining
Nairobi	Eastern	Kenya	Trade
Elizabethville	Southern	Belgian Congo	Mining
Bulawayo	Southern	Southern Rhodesia	Mining
Kano	Northern	Nigeria	Trade
Salisbury	Southern	Southern Rhodesia	Mining

To Determine the Understanding of Adaptation in the Half Wet, Half Dry Grasslands

Directions: Select the one item in each group of four which best shows adaptation to the wet-and-dry climate.

1. Long-horned cattle, brown cattle, humped cattle, short-horned cattle
2. Wooden houses, mud houses, bamboo houses, stone houses
3. Slate roof, straw roof, tile roof, tin roof
4. Narrow-leafed trees, broad-leafed trees, evergreen trees, tall trees
5. Picket fences, wire fences, board fences, thorn bush fences

STUDENT READING LIST FOR CHAPTER 4

NON-FICTION

***Akeley, M., Rumble of a Distant Drum, Dodd, 1949. The Watusi people of savanna Africa come to life in this true account of Mihigo, who accompanies the author on a safari.

FICTION

**Best H., Garram the Hunter, Doubleday, 1930. A Fulani boy and his dog roam the wide African plains in search of excitement.

**Best, H., Tale of the Four Tribes, Doubleday. This is exciting adventure along the Benue River in Nigeria.

***Fitzpatrick, J., Jock of the Bushveld, Longmans, 1948. A description of the early days of the transport riders on the grasslands of south Africa furnishes the background for this story of a dog named Jock.

**Stevens, A., Lion Boy, Lippincott, 1938. Simba, son of a warrior chief, finds that life has its problems.

**Waldeck, T., Lions on the Hunt, Viking, 1952. When his mother was killed by a native spear before she had a chance to instruct him in self-preservation, the lion cub Sur-Dah had to learn by experience.

**Waldeck, T., On Safari, Viking, 1940. Photography and science become dangerous when the subjects are animals of the grasslands.

**Waldeck, T., Treks Across the Veldt, Viking, 1944. The techniques of trapping animals must be perfect since a slip can mean sudden death.

AUTOBIOGRAPHY

***Hunter, J., African Hunter, Harper, 1954. Go with a professional white hunter on a safari to the Serengeti Plain and hunt in Masailand.

**Oberjohann, H., Komoon, Pantheon, 1952. The author relates his own experiences in hunting and studying elephants in the Lake Chad region of Africa.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 4

African Big Game, 1948 (mp, b&w, sound, 20 min, #1). Deals with big game hunters in their quest for animals, skins, and ivory in French Equatorial Africa.

Bantu Frontier, 1950 (mp, b&w, sound, 20 min, #26). Describes the growth and development of the Bantu people in their contact with Western civilization.

Bantu Girl, 1952 (mp, color, sound, 14 min, #17). Shows a Bantu child as she helps her mother at home and plays with other children.

Equatorial Africa, 1951 (fs, b&w, #69). Village life of the Kaliko tribe on the edge of Uganda and the Sudan. Their land is whatever they wish to clear and cultivate.

The Golden City, 1951 (mp, b&w, sound, 18 min, #29). Shows Johannesburg, the center of south Africa, and life in the gold mines.

Hausa Village, 1947 (mp, b&w, sound, 22 min, #14). Shows the life and customs of the Hausa people, who work so energetically at farming and fishing that they thrive and prosper.

Native Tribes, 1952 (fs, color, 55 fr, #23). Describes the daily life and customs of the Sonyo and the Masai, two nomadic cattle-raising tribes of east central Africa.

People of the Chad, 1948 (mp, b&w, sound, 13 min, #1). Shows how these people work primitively due to lack of transportation. Despite difficulties, 20th century influences have penetrated.

Riches of the Veldt (South Africa), 1948 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 48 fr, #65). Europeans and native Africans earn their living by growing varied fruits and vegetables and by cattle ranching. Mining is also discussed in great detail.

CHAPTER 5: LANDS OF MANY VILLAGES

YOUR OWN LOOK AHEAD INTO CHAPTER 5

Only a short time ago the whole subcontinent of the Indian Peninsula was a crown colony of the British Empire. Not until 1947 did the inhabitants of this area secure their independence. You will recall that two separate countries were formed -- the Republic of India and Pakistan. Most of the people who followed the Hindu religion went to live in the Republic of India, while the Moslem people formed the Dominion of Pakistan. Pakistan became a country in two parts divided by the Republic of India. One part is located in the drier, western portion of the Indian Peninsula, and the other part lies on the rich delta land of the Ganges River in the east.

The formation of the two countries along religious lines caused many Hindus to migrate from Pakistan and many Moslems to leave their homes in India. These shifts in population brought about many problems, some of which are still unsolved. In Chapter 5, your students have an opportunity to visit the people of these new nations of the world and to examine some of their problems.

The chapter is divided into several sections as follows:

1. "Let's Look at Maps", pp. 104-105.

2. "The Three Seasons of India", pp. 106-107, gives an account of the monsoons and shows how the people of the Indian Peninsula are dependent upon them.

3. "India's People and Their Villages", pp. 107-109, presents a view of India's mixed, dense population. It describes the life of the millions who live in villages, and explains the division of India along religious lines.

4. "The Indian Farmer and His Work", pp. 109-111, tells how the Indian farmer, on his small farm, grows many crops with simple tools. This section also explains how the people are directly affected by the seasonal rains and what is being done to solve the major problem of producing enough food to feed the people.

5. "The Great Cities of India", pp. 111-113, describes New Delhi, the capital; Benares, the holy city; and Calcutta and Bombay, the chief ports.

6. "The Valuable Rice Bowl of Asia", pp. 113-114, shows how the countries of Burma, Thailand, and Indo-China are able to produce enough surplus crops to help feed other people in Asia.

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FOR YOUR OWN READING

The books listed below might furnish you with additional background material for this chapter.

George B. Cressey, Asia's Lands and Peoples, Chs. 28-36. (McGraw-Hill)
O.H.K. Spake, India and Pakistan, A General and Regional Geography. (Dutton & Co.)
E.H.G. Dobby, Southeast Asia. (John Wiley and Sons)
R. J. Russel and F. B. Kniffen, Culture Worlds, Ch. 41, "The Indian Realm", Ch. 47, "Burma, Siam and Indo China". (Macmillan)

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MAJOR QUESTIONS

To guide your students in their study of this chapter, you will probably want to raise many different questions about the grasslands of Asia. Here are two that are especially thought-provoking, and you may want to stress them with your class. The information that answers each of these questions emphasizes important ideas contained in the chapter. The answers are given for your convenience.

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

→

Major Question #1:
Why are the monsoons so important to India's prosperity?

Conditions	Effects of the Monsoon
Population: more than 400 million Population increases 4 million each year. Majority of people are farmers. Average farm is 5 to 6 acres. Farmers have crude implements. Regular crop production falls below needs. There are many useless cattle and other animals which eat food. Must grow crops suited to climate.	Prosperity: When the rains arrive at the right time, the crops are usually good. Famine: When the rains arrive before the warmest season and stop too soon, the crops fail. When the rains arrive too late, the crops die. When the rainfall is too heavy, the crops are destroyed by flood. When the rains do not come at all, the crops wither in the field.

Primary Objective:		Major Question #2:
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.	→	How do the people of India depend on the people of southeast Asia?

Republic of India and Pakistan		Southeast Asia -- "Rice Bowl" Countries	
Ports of Bombay, Calcutta, and Madras		Thailand through port of Bangkok Burma through port of Rangoon Indo-China through port of Saigon	
They sell:	cotton, cloth, rugs, sacks, tea, hides	They sell:	rice, tin, teak, oil, tungsten
They need:	rice, oil, other food, machinery	They need:	cotton, cloth, sacks

SUGGESTIONS FOR TEACHING

The two Major Questions suggested for this chapter are closely related to the fact that people depend upon their natural environment and upon one another. There is probably no better example than India of so many people being solely dependent upon one factor of their environment. The prosperity of India's huge population depends heavily upon its seasonal rain. In explaining this important relationship to your students, you may wish to use some of the suggestions for teaching listed in the following pages.

Arousing Interest in the Chapter. There is no one "best" way to introduce a topic. However, any good introductory lesson creates interest, gives a purpose for studying, and offers a preview of the work to be covered. You might want to try one of the following suggestions for introducing this chapter.

1. Hardly a day passes without some mention of the Republic of India or Pakistan in the daily newspaper. You might bring one of these current events to class. If possible, the current event should deal with one of the important problems faced by the Indian people. The problem of securing enough food is a good one.

Ask your students to locate the country of the world that is the scene of the current event. A discussion of its location will reveal what the class already knows about the area. You might also inquire as to the reasons behind the current event. If these cannot be suggested, they would make good problems for future study. During this introductory lesson, your students should be made to feel the need to find out more about the people and land of India.

As questions arise or comments are made, you or the class secretary might keep a list of them for future reference.

2. You might give your class a brief history of colonialism in the Indian Peninsula. For many years the area was a colony of Great Britain. The British made many improvements in the colony that benefitted all the people. They constructed roads and canals, built mills and factories, established schools and universities, and modernized cities and methods of agriculture. But many of the educated people dreamed of a free India. After many years of struggle, the people finally secured their independence in 1947. At that time, two countries were formed, the Republic of India and the Dominion of Pakistan. These two countries were separated on an unusual basis, religion. Today, most of the people of the Republic of India are Hindus, while Pakistan in inhabited primarily by Moslems. Perhaps the class will be interested in finding out how these two nations have made out since they became individual countries and started out on their own.

3. You might also use the pictures in the textbook to create interest. By comparing the pictures in Chapter 4 with those in Chapter 5, your class can discover some interesting similarities and differences between the grasslands of Africa and Asia. As your students examine and discuss the pictures, you will be able to point out certain similarities, such as these:

1. Many of the houses are made of grass.
2. Many of the houses have roofs made of stalks.
3. Most of the cattle have humped backs.

Differences are also apparent, and your students may recognize some of them:

1. In India, cattle are used as beasts of burden.
2. The Indian people are of a different race.
3. In India, there seem to be many more people.

After similarities and differences have been noted, the class may be encouraged to find out why these similarities and differences exist.

Let's Look at Maps (pp. 104-105). After "taking the trip" from New York to New Delhi (including a study of the pictures, flight globe, and exercise on pp. 103-104), your students are ready to examine the grasslands of India on the maps on pp. 104-105. You might again wish to conduct the map study as a class activity, having one or two of your students working at the wall maps and the globe. By following the directions given on pp. 104-105, your students will become acquainted with many important aspects of the Asian grasslands. At the same time, they will get a chance to review previously learned map skills and learn some new ones.

Map Skills

	Review	New
Direction	N,S,E,W,NW,NE Latitude	
Distance	Recognition of differences in scale	
Location	Latitude	North Tropic
Symbols	Political boundaries, continents, island, peninsula, ocean, coastline, cities, rivers (& source), mountains	
Legend	Hatching to indicate grassland Shading to indicate differences in rainfall (relative difference) Shading to indicate population density (number of people per square mile)	
Comparison	Location of 2 climatic areas compared on world map Population densities of 2 areas compared	Number of people per square mile in 2 climatic regions compared

Suggested Answers for Map Study

1. The tropical grasslands of Asia extend from 8°N to 32°N. The northern grasslands of Africa do not extend as far as the North Tropic.

2. Grasslands are found in the Republic of India, Pakistan, Burma, Thailand, and Indo-China on the mainland of Asia. The Arabian Sea and the Bay of Bengal surround the Indian Peninsula.

3. New Delhi is located on the Jumna River and Benares on the Ganges River. The Brahmaputra River has its source high in the Himalayas.

4. East of the Indian peninsula, Burma, Thailand, and Indo-China contain large areas of tropical grassland. The Irrawaddy River flows through Burma, the Chao Phraya River through Thailand, and the Mekong River through Indo-China.

5. This requires your students to follow directions in order to do the activity.

6. There are many more people per square mile in the Republic of India than there are in the countries of southeast Asia.

7. On most of the Indian peninsula, the population density is about 125 to over 250 people per square mile. In the African grasslands, the density ranges from 2 to 25 people per square mile.

Reading About the Three Seasons of India (pp. 106-107). Pages 106-107 of the textbook describe the effect of the seasonal winds on the peninsula of India. You will want to remind your students to look at the map on p. 106, which shows them the wind and rainfall pattern during the month of January. By following the black arrows on the map, they can observe that the winds are blowing from the continent toward the sea. By referring to the map legend, they will also notice that most of the peninsula is receiving less than 1" of rainfall.

You will also need to draw your students' attention to the map on p. 107. Here the situation is reversed. The black arrows on this map show that during July the winds are blowing from the water bodies around Asia toward the land area. These winds pick up moisture as they blow over the water and bring rain to the land. Your students will be able to see that rainfall is extremely heavy, as indicated by the black areas and the cross hatching. Most of the peninsula receives from 8" to more than 12" of rain during July. If your students compare these figures with rainfall figures for their local community, they will probably agree that India receives a great deal of rain.

As a follow-up to the map study on pp. 106-107, you might ask your students what causes the seasonal winds to blow toward the land during the summer and to blow away from the land during the cool season.

Even after some of your students have attempted to explain these seasonal winds, called monsoons, other students may still have difficulty in understanding why the seasonal winds blow as they do, why there is little or no rain during part of the year, and why during the rest of the year there is heavy rainfall. To help your class understand these things more fully, you might guide them in doing two simple scientific experiments that may help to answer their questions.

These experiments require a minimum of equipment, but it must be assembled in advance. You will need a thermometer, a broom stick, a tin can full of sand, and a tin can full of water.

You may want to ask your class to write the experiments on sheets of paper. Have your students write each experiment on a separate piece of paper.

Experiment #1

Equipment: Thermometer, string, broom stick

Procedure: Place the thermometer on the floor. Wait several minutes and then read the thermometer, making note of the temperature. Next, tie the thermometer to the broomstick and hold the thermometer as close to the ceiling as possible. After several minutes, take another reading, and note the temperature.

Results:

Temperature reading at ceiling	78°
Temperature reading on floor	74°
Difference	4°

Conclusions: The air at the ceiling is four degrees warmer than the air on the floor.

Application: Warm air rises.

Experiment #2

Equipment: Thermometer, can of sand, can of water, sunshine or a radiator in the winter

Procedure: Allow the can of water and the can of sand to stand in the room all night so that the temperatures of the water and sand are about the same. At the beginning of the class period, record the temperature readings of the water and sand. Then place both cans in the warm sunshine or, if it is winter, on or in front of a radiator for about 20 minutes. After 20 minutes, record both temperatures again. Next, place both cans in the shade or, if it is winter, outside the window for 10 minutes. Finally, record the temperatures again.

Results:	water	diff.	sand	diff.
Original reading	72°		72°	
After exposure to heat	74°	2°	82°	10°
After exposure to shade	73°	1°	75°	7°

Conclusion: The water temperature rose 2° when heated. The sand temperature rose 10° during the same heating period. The sand heated up more quickly than the water. The water cooled only 1° while the sand cooled 7°. Thus, the sand also cooled more quickly. Sand gains and loses heat faster than water.

Application: The land surface gains and loses heat faster than water bodies.

Once the experiments have been finished and conclusions and applications have been determined, the ***advanced students will probably be able to apply the principles demonstrated by these experiments in explaining the monsoons. **Average and *reluctant students, however, may need help in applying the principles. You might say that the can of sand in Experiment #2 represents the land mass of Asia, and the can of water represents the oceans that surround Asia.

You might explain further that as the sun's hot, direct rays move toward the North Tropic, a situation exists on the Indian Peninsula similar to that created by placing the cans of water and sand in the sun. The land heats up quickly, warming the air above the land. Your students concluded in Experiment #1 that warm air rises. They should now be able to see that when the warm air over the Indian Peninsula rises, the cooler air that is over the water blows in toward the land to fill the vacancy. The air that has been over the ocean contains a great deal of moisture, which now drops on the land as rain. This rain-bearing wind is called the wet monsoon.

You may also need to explain the reasons for the dry season. As the sun's direct rays move away from the North Tropic and proceed toward the South Tropic, a situation exists on the Indian Peninsula similar to that created by placing the cans of water and sand in the shade. The land area cools very quickly. In fact, the land gets a great deal colder than the ocean. The warmer air over the ocean begins to rise, and the cooler air that has been over the land blows toward the ocean to fill the vacancy. This cooler air, called the dry monsoon, crosses nothing but the land of the Indian Peninsula on its way to the sea and bears little or no rainfall.

Once the reasons for the monsoons are understood, your students might look again at the maps on pp. 106-107. You might point out that in the tropical rainforest areas of southeastern Asia there is heavy rainfall throughout the year. Regardless of the way the monsoons blow, either toward the land or away from the land, the winds must cross bodies of water which provide moisture for rainfall in these areas. The east coast of Indo-China, Malaya, and Sumatra receive rainfall from both the winter (dry/ and summer (wet) monsoons.

Reading About the Grasslands of Asia (pp. 107-114). The "Checking Up" questions on pp. 109, 111, 113 and 114 are good guides for your students as they read pp. 107-114, which deal with India's people, the cities of India, and the countries of southeast Asia. As you teach this material, you may wish to follow suggestions similar to those given on pp. 7-8 of Booklet #3. You might also stress vocabulary skills, emphasizing the words listed under "Words to Understand" on p. 114. After reading the chapter, the class might answer the "Questions to Think About" and "We and They" on p. 114.

Workshop Activities. On pp.18-19 of Booklet #3 suggestions were given for the formation of various classroom committees. Here are some additional ideas for projects which will enrich the reading material on pp. 107-114.

Flash Card Committee

Divide the class into two teams. As each flash cards is presented, the two teams can take turns telling the meaning of the word. The committee is the judge as to whether the answer is correct. The team answering correctly keeps the card. The team collecting the most cards wins the contest.

Art Committee

Draw animals that are characteristic of the grasslands; charts showing the circulation of the monsoons; travel posters advertising Bombay, Calcutta, and New Delhi; pictures of the temples, mosques, and minarets.

Bulletin Board Committee

Secure or draw a large map of the world. The grasslands can be colored. Pictures which have been cut from magazines, newspapers, or obtained from the Art Committee can be mounted around the map. These pictures can be connected to their homelands by a piece of black thread or by a drawn line.

Library Committee

Select several of the fiction books which are listed in the Student Reading List and read exciting passages to the class. Encourage students to read the books and report on them. A simple system can be used for these reports: the students might give the title, author, brief synopsis of the story, and an account of the parts of the story that were influenced by the climate.

Weather Committee

Gather additional climatic data from other grassland stations. Graphs may be used to show this data. Additional material can be found on p. 420 of the text book and in reference books. Compare this data with that of your own community.

Museum Committee

Collect some of the products which are typical of the grasslands around the earth. The collection might include samples of cotton, rice, corn, peanuts, and coffee beans. A collection of minerals could also be started.

SUGGESTED ANSWERS FOR CHAPTER 5

"Checking Up", p. 107

1. India has three seasons. The dry season begins in the spring, and the ground becomes parched and cracked from the heat and drought. The wet season comes in the summer, and the rain beats in torrents against the baked earth. The cool season, with its warm days and cool nights, comes in the fall.

2. India's seasonal winds are called monsoons. In the winter, the winds blow from central Asia and carry little water. In the summer, the winds shift and blow toward the land from the Indian Ocean. These moisture-laden winds bring the rains.

3. The dry season is a trying time because the extreme heat and dryness cause the people to be quarrelsome and irritable. They are worried that the rains may not come. Food and water are usually scarce. The cool season is a time of hardship for the poor people because they have little clothing and their houses offer little protection from the cool nights.

"Checking Up", p. 109

1. The people build their houses out of materials that are near at hand. In the areas of heavier rainfall, houses are made of bamboo or reeds with thatched roofs. In areas of lesser rainfall, the houses are made of mud with roofs of tile.

2. In an Indian village, the families group their houses according to occupations. Butchers live in one section, carpenters in another, and merchants in still another. Each occupation has its own section in which to live.

3. The wells are very important to the village because they furnish the only available drinking water.

4. Most of the people of Pakistan are Mohammedans, whereas the Republic of India is inhabited primarily by Hindus.

"Checking Up", p. 111

1. The wet-season crops grown in India include rice, maize, cotton, and peanuts. During the dry season wheat, millet, barley, and flax are grown.

2. Three methods of irrigation are: (1) wells which provide a limited supply of water for high-value crops, (2) artificial reservoirs that catch the water during the rainy season, and (3) irrigation canals which distribute some of the waters of large rivers.

3. Lack of food is India's greatest problem. Because the land is so densely populated, there is not enough food to feed all of the people. Also, the people do not have money to buy food from other lands. The government is building irrigation projects, buying large land holdings and dividing them into small farms, sending trained agricultural teachers to the villages, and building chemical plants to make cheap fertilizers.

"Checking Up", p. 113

1. Because New Delhi is located in the center of the Indian Peninsula, it has an excellent location for a capital city. Benares is important because it is a holy city, and thousands of Hindu pilgrims go there each year to bathe in the sacred Ganges River and to worship in the city's temples and shrines.

2. Calcutta has modern sanitation, splendid office buildings, hotels, shops, and a beautiful park. Bombay has become very overcrowded. Although there are beautiful homes, modern buildings, boulevards, and parks, the homes of the workers are among the worst slums in the world.

3. The Republic of India is becoming a major manufacturing nation in Asia. As modern manufacturing increases, trade expands and cities grow in size and importance.

"Checking up", p. 114

1. Burma, Thailand, and Indo-China are known as the Rice Bowl of Asia because they usually have a surplus rice crop to export. The warm climate, plentiful rainfall, and rich soil in this area enable the farmers to grow large rice crops. On the higher irrigated land, the farmers grow millet, cotton, peanuts, and sorghum.

2. The valuable minerals found in southeast Asia include oil, silver, lead, rubies, tin, and tungsten.

3. Mandalay is the chief city of Burma. It is a market city and a religious center. It has a mixed population of Burmese, Chinese, Hindus, and Europeans. Bangkok is the chief port and capital of Thailand. It is one of the leading rice ports of the world. Saigon is the chief city of Indo-China and an important seaport. Because it resembles many cities in France, it has often been called the Paris of the East.

"Questions to Think About", p. 114

1. When the summer monsoon fails to bring the much needed rain to India, many people starve and a famine usually occurs.

2. There were two main religions among the people in old India, Hinduism and Mohammedanism. The Hindus had their temples and the Mohammedans had their mosques in all the villages. When Pakistan separated from the Republic of India, most of the Moslems went to live in Mohammedan Pakistan. As a result, there are many deserted mosques in the Republic of India.

3. Famines are frequent in India because the people depend so heavily on the seasonal rainfall. Some years the rain comes too early to benefit the crops. Some years the rain comes too late or doesn't come at all. At other times, the rainfall is so heavy that it floods the fields and destroys the crops. The people of India depend on buying surplus rice from the lands in southeast Asia.

4. Some of the cattle, such as the water buffalo and the zebu, are used for plowing or pulling carts. Other cattle do nothing but eat and roam the streets of Indian towns and villages until they die. The Hindu religion forbids its followers to take the life of any animal. Therefore, these cattle roam unmolested.

5. Because there are so many people and the land area is comparatively small, each farmer can have only a small farm. Without mechanical tools, a farmer can work only a small amount of land.

6. The countries of southeast Asia are important in international trade because they have surplus rice and minerals to export.

"We and They," p. 114

1-2. These questions give your students an opportunity to think more carefully about farming in their own region as well as in India.

3. Answers can be found on the tables on pp. 441, 437, and 425 of the textbook.

Country	Area (Sq. Mi.)	Population
Pakistan	364,737	75,635,496
Rep. of India	1,362,420	361,239,485
Total	1,727,157	436,874,981
U. S.	3,022,387	150,697,361

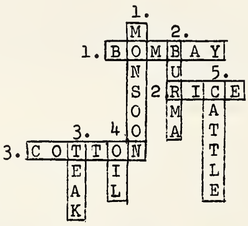
EVALUATION EXERCISES

To Check on Your Students' Understanding of Factual Information

Directions: Fill in the boxes of the crossword puzzles.

Across
1. A leading port in India.
2. Surplus crop in southeast Asia.
3. Wet-season crop in the Republic of India.

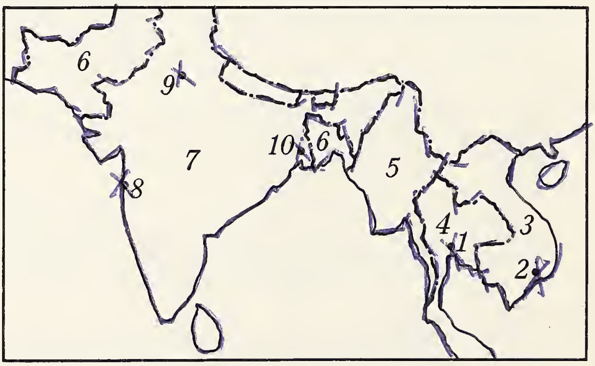
Down
1. Seasonal wind of Asia.
2. Country in southeast Asia.
3. Wood from southeast Asia.
4. Export of southeast Asia.
5. Useful and useless animals of India.



To Check on Your Students' Map Skills and Knowledge of Location of Places in the Tropical Grasslands of Asia

Directions: On the map, find the number that indicates the location of each place listed below. Write the appropriate number in front of each place.

(7) Republic of India
(8) Bombay
(10) Calcutta
(9) New Delhi
(6) Pakistan
(4) Thailand
(3) Indo-China
(5) Burma
(2) Saigon
(1) Bangkok



To Check on Your Students' Vocabulary and Understanding of Religions

Directions: Match the numbers in Column 1 with the letters in Column 2. Each letter can be used only once.

Column 1

1. Mohammedanism (D)
2. Hindus (A)
3. Moslems (E)
4. Mosque (F)
5. Temple (C)
6. Minaret (B)

Column 2

A. Do not believe in eating meat or in killing any animals.
B. Tall towers used for calling people to pray.
C. A Hindu church.
D. Main religion in Pakistan.
E. Another name for Mohammedans.
F. A Mohammedan church.

To Check on Your Students' Understanding of the Problems of the People of the Indian Peninsula

Directions: Look through the following list. Check those items which you think would be most helpful to the people of the Indian Peninsula.

Building more railroads
Building fertilizer plants (x)
Building schools (x)
Building highways
Building irrigation dams (x)
Building more cities
Providing more land for farming (x)
Providing agriculture teachers (x)
Providing tractors
Providing television
Providing temples
Providing irrigation canals (x)

STUDENT READING LIST FOR CHAPTER 5

NON-FICTION

**Bothwell, J., Story of India, Harcourt, 1952. The author illustrates the influence of climate and topography upon the people of India. There are also chapters on history, religion, and customs.

***Kennedy, J., Here Is India, Scribner, 1945. This is a very clear and readable account of India, a land of contrasts.

***Modak, M., Land and People of India, Lippincott, 1945. Chapter I, "The Land", describes the varied physical features of India and how they influence the lives of the people.

FICTION

*Bothwell, J., Star of India, Morrow, 1947. An Indian girl and her father try to restore a family medal to its rightful owner. When her father disappears, the girl carries on alone.

**Bothwell, J., Sword of a Warrior, Harcourt, 1951. A young Indian apprentice outwits some clever thieves.

*Bothwell, J., Thirteenth Stone, Harcourt, 1946. The Pushkar Fair, a holy man, and a horse dealer help reveal to Jivan the mystery of his family.

*Comfort, M., Kish of India, Beckley-Cardy, 1953. Kish, a Hindu of high caste, becomes involved with a ruby and a maharaja.

***Godden, R., The River, Little, 1946. As swiftly as the river that flowed passed her door in Bengal, India, Harriet knew death, birth, cruelty, kindness, retribution, and love.

**Louden, C. & Louden, G., Rain in the Winds, Scribner, 1953. Arun and his family live in a land where drought brings famine and the coming of rain brings life.

**Nevins, A., The Adventures of Duc of Indo-China, Dodd, 1955. An Annamese boy helps rebuild his ravaged land.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 5

Asian Earth, 1954, (mp, color, b&w, sound, 22 min, #5) Shows the daily activities and problems of a Hindu peasant family of the lower Ganges Valley.

A Family Of India, 1955 (mp, b&w, sound, 13 min, #69). Describes an Indian family -- its work, its shopping, its recreation, and its education.

Farmers Of India, (Middle Ganges Valley) 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Deals with life in a densely populated, undeveloped land which is marked with great poverty, poor living conditions, and famine.

Hindu Family, 1952, (mp, b&w, sound, 10 min, #23). Portrayal of family relationships in everyday work and play in India as seen in the wedding of a herdsman's daughter.

New India's People, 1953 (mp, b&w, sound, 26 min, #45). A "March of Time" film comparing the lives of different castes in India from the untouchable to the maharaja.

FEATURE: COFFEE GROWERS AND COWBOYS (pp. 115-121)

Features, such as "Coffee Growers and Cowboys", have been included in most of the units in The World Around Us. The features in Unit Two enable your class to explore additional areas of the world that have tropical grasslands. Although the areas discussed in the features are less prominent than those developed in the chapters, they illustrate many geographic concepts that are a necessary and important part of the global picture.

The features are really chapters in miniature, and you may want to develop them in the same way you develop the regular chapter material. All features contain maps, pictures, and "Checking Up" questions to aid your students. If you are teaching a one-semester course in world geography or are pressed for time, you could reserve the material in the features for the ***advanced students or those students who are interested in extra work. The features also provide valuable material for special reports, both oral and written.

"Coffee Growers and Cowboys" tells about the tropical grasslands of the Americas. The people who live in these grasslands have been able to conquer an unfavorable environment to raise crops and produce goods needed by the rest of the world. You might point out to your class that the grasslands of South America form two large and separate regions--one in Brazil and another in Venezuela. Coffee grows well in the alternating wet and dry seasons of the Brazilian grasslands. Cattle raising and petroleum have made the grasslands in Venezuela prosperous.

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FOR YOUR OWN READING

To enrich your knowledge about the American grasslands, you may wish to consult one or more of the following books.

Preston James, Latin America, Ch. 14, "The Southeast"; Ch. 15, "São Paulo"; Ch. 2, "Venezuela"; pp. 62-64, "The Maracaibo Lowlands"; pp. 64-67, "The Orinoco Llanos."

J. Russel Smith and M. O. Phillips, North America, Ch. 42, "The West Indies"; Ch. 43, "Yucatan and the Bahamas"; Ch. 44, "Uplands of Central America"; Ch. 46, "Pacific Coast of Central America and Southern Mexico"; Ch. 47, "The Central Plateau of Mexico".

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MAJOR QUESTION

There are several important questions that could be asked about the tropical grasslands of the Americas. However, one of the questions that you may want to stress with your class is given below. This question reinforces the idea of interdependence of all people, one of the Primary Objectives of teaching world geography. A detailed answer is given for your convenience.

Primary Objective:		Major Question:
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.	→	What products does the world get from the American grasslands?

Brazil	Venezuela	
Coffee ($\frac{1}{2}$ world's supply)	Cattle	Sugar Cane
Cotton	Iron Ore	Cacao
Iron Ore	Oil	Coconuts

SUGGESTIONS FOR TEACHING

The suggestions given here can be used to guide your class as they study this feature. You will want to select the suggestions that are most appropriate to your classroom situation.

Reading the Feature (pp. 115-121). To facilitate your students' reading of this feature, you might wish to divide the reading material into two parts. The first part could cover pp. 115-119, ending at the heading, "The Tropical Grasslands of Venezuela". Questions 1-3 in the "Checking Up" exercises on p. 121 might serve as guide questions for your students' study. The second part of the reading could begin with "The Tropical Grasslands of Venezuela" and continue to the end of the feature. Questions 4 and 5 in the "Checking Up" exercises on p. 121 could be used as guide questions for this part of the reading lesson. By dividing the material into two parts, you can keep each reading assignment short, and enable your class to study the two grassland regions of South America separately.

Map Study. Maps showing the American grasslands are furnished on p. 117 of the textbook. You can use directions and questions similar to those below to further your map study program.

1. Between what degrees of latitude are the southern grasslands in the Americas? (5°S - 24°S) The northern? (1°N - 25°N). How do the locations of these grassland areas compare with those found in Africa, map p. 95? (Those in Africa do not extend as far north, but the African grasslands extend farther south.)

2. What countries in South America are included in the tropical grasslands? (Columbia, Venezuela, the Guianas, Ecuador, Peru, Brazil, Bolivia, Paraguay, and a very small part of Argentina). What islands in the Caribbean Sea have have the grassland climate? (Cuba, Jamaica, Haiti, Puerto Rico, Dominican Republic). What part of the U. S.? (The tip of the Florida peninsula).

3. Refer to the population map on p. 117. Describe the density of population of the South American grasslands. (Not very dense). Now turn to the map on pp. 416-417. How many people per square mile live in the South American grasslands? How does this population density compare with that of the Republic of India? (South America has from 2-25 people per square mile; India has 25 to over 250 per square mile.)

4. Locate the Orinoco River in Venezuela and note that it flows through the northern grassland areas. Find the Lake Maracaibo district in Venezuela. This area has one of the most productive oil fields in the world. Locate the cities of Caracas and Ciudad Bolivar. Also find São Paulo and Santos, which are famous coffee cities of Brazil, and Rio de Janeiro, the capital.

Words to Understand. Some new and unusual words are introduced in this feature. You might want to emphasize these words to help your students develop skill in using a geographic vocabulary: escarpment, inclines, fazendas, pollen, jute, landlocked, llanos, poncho, mesa.

SUGGESTED ANSWERS FOR FEATURE (p. 115-121)

"Checking Up", p. 121

1. The chief disadvantage of the Brazilian upland was its high escarpment facing the Atlantic coast. Not even donkeys, loaded down with bags of coffee beans, could pick their way down the winding trails through these gorges. This disadvantage was overcome by building a very expensive incline and cog railroad to the top of this steep line of cliffs.

2. The climate of eastern Brazil is mild and the average temperature is perfect for growing coffee. Two thirds of the rain which falls in this district comes when the coffee is growing. It is dry during blossom time, and the lack of rain keeps the pollen from being washed off the flowers. This dry season also favors the ripening, gathering, drying, and preparation for market of the coffee berries.

3. The people of Brazil also engage in raising cotton, ranching, and manufacturing.

4. Cattle raising is the most important industry on the llanos. The industry is hampered by poor grass, the dry season, and lack of transportation.

5. The Lake Maracaibo region is wealthy because it contains huge plantations which produce sugar cane, cacao, and coconuts for home use and export. Even more important is the presence of one of the most productive oil fields in the world.

STUDENT READING LIST FOR FEATURE (p. 115-121)

NON-FICTION

**Brown, R., Land and People of Brazil, Lippincott, 1946. This book deals with the history, geography, and social customs of the people of Brazil.

FICTION

**Clark, A., Santiago, Viking, 1955. Conflict between the old and the new presents a dilemma for a Guatemalan boy faced with a decision regarding his people.

**Desmond, A., Jorge's Journey, Macmillan, 1942. Jorge was a good coffee picker but circumstances forced him to run away.

*Haefner, R., Brazil, Land of Surprises, Lyons & Carnahan, 1943. Cattle, coffee, and gems are emphasized in the second half of this book.

** Rothberry, A., South American Roundabout, Dodd, 1952. Chapter XVIII, "Santos & Coffee," and Chapter XX, "Brazil," give glimpses of the grasslands of South America and how the inhabitants make a living.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 115-121)

Brazil, 1943 (fs, b&w, 59 fr, #12). Includes material on products, industries, and natural resources. A large portion is devoted to coffee, its growing, and shipment.

Brazil, 1940 (mp, b&w, sound, 11 min, #23). Provides geographical orientation to Brazil's vast extent. A land owner, an agent, and a family of pickers are seen on a large coffee plantation.

Brazil Today, 1953 (mp, b&w, sound, 18 min, #45). Shows the enormous progress made by this nation in its change from an agricultural region into one of the wealthiest of modern powers.

Chico Learns To Read, 1952 (fs, color, 40 fr, #69). A simple story based on the daily life of a boy who lives on a coffee plantation.

Story Of Coffee, 1947 (mp, b&w, sound, 11 min, #52). Planting, picking, shipping, and processing of coffee.

Story Of Coffee (fs, b&w, #6). Origin and history of coffee. Steps in production from seedling plant to finished product. (May be retained permanently.)

Venezuela Moves Ahead, 1943 (mp, color, sound, 36 min, #65). An analysis from an economical, historical, and geographic viewpoint.

FEATURE: A HARD AND LONELY LAND (pp. 121-123)

Of all the tropical grasslands in the world, those in Australia are the most difficult in which to live. In this feature, your class will be able to see why many people have tried but few have succeeded in making a living in northern Australia.

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FOR YOUR OWN READING

The following book may provide you with useful additional background material.

Ernestine Hill, The Australian Frontier (Doubleday, Doran & Co.)

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MAJOR QUESTION

The tropical grasslands of Australia, unlike those of South America, are areas where man has not been very successful in overcoming a difficult environment. Your students will discover why as they try to find answers for the Major Question below.

Primary Objective:	Major Question:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.	Why do the Australian grasslands produce so little?

Reasons	
Lowlands are very hot. Seasonal rainfall is uncertain and uneven. Animal pests destroy crops.	Isolated location. Poor transportation to port. Poor steamer service at port.

SUGGESTIONS FOR TEACHING

The title of the feature, "A Hard and Lonely Land" (p. 121) makes a good introduction for the reading. You might ask your students, "Where is this hard and lonely land?" "What does the word 'hard' suggest about the region?" "What does the word 'lonely' suggest?" Your students will be able to answer these questions and find out more information about the grasslands of Australia as they read pp. 121-123. The two "Checking Up" questions on p. 123 are good guides for reading. They re-emphasize the important information in the feature.

You might also want to conduct a short map study based on the map on p. 122. Cattle station and wallabies can be added to your students' list of "Words to "Understand".

SUGGESTED ANSWERS FOR FEATURE (pp.121-123)

"Checking Up", p. 123

1. Five reasons why some farmers have deserted their farms in the Australian grasslands are: (1) the grasslands are extremely hot because they are lowlands, (2) the seasonal rainfall is very uncertain and unpredictable, (3) crops are destroyed by the animals, (4) crops are destroyed by droughts and floods, and (5) the grasslands are isolated and there is a lack of markets.

2. The settlers only link with the outside world is a little coastal steamer which makes five trips a year. Shipments of peanuts often spoil on the wharf while waiting for the arrival of steamer. Sometimes they are swept away in a violent storm. If this happens, the peanut planter has nothing to show for an entire year's work.

STUDENTS' READING LIST FOR FEATURE (pp.121-123)

NON-FICTION

*Harris, L., & Harris, W., Let's Read About Australia, Fideler, 1950. This is predominantly a picture book of the animals and flowers of Australia.

**Irwin, W., & Irwin, D., Australia, and New Zealand, Macmillan. Animal, birds, and the human inhabitants of the grassland region are discussed in this account of the land "down under".

**Macpherson, M., Australia Calling, Dodd, 1946. Janis and her father travel to Australia and visit the Northern Territory.

**Monypenny, K., The Young Traveler in Australia, Dutton, 1954. While this book deals with Australia as a whole, portions of it are applicable to the grassland region.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp.121-123)

Arnhem Land, 1950 (mp, color, sound, 20 min, #8). Sequences filmed during a geographic expedition in the far north of Australia. Many scenes show the natives in their surroundings.

Land of the Kangaroo (mp, color, sound, 30 min, #47). Presents kangaroos, koalas, colorful bird life, tropical flowers, and huge ant hills of Australia.

North to the Sun, 1952 (mp, b&w, sound, 10 min, #8). Depicts the Atherton Tableland and Cairns areas of Queensland in northern Australia.

Outback Patrol, 1953 (mp, b&w, sound, 20 min, #8). A mounted constable patrols scattered cattle stations, reservations, and mica mines in Australia's far north.

REVIEWING UNIT TWO

PLANNING THE REVIEW

The primary objectives and understandings stressed in Units One and Two can be emphasized again in reviewing Unit Two. The idea of interrelationship between man and his natural environment is a valuable concept to review. Your students can broaden their understanding of this concept by comparing the ways people have adjusted their living patterns in two climatic regions -- the rainforests and the grasslands. The same geographic principles are at work in both of these climatic regions. For example, your students can see how changes in the environment have affected the way people live, and how people have learned to change and control their environment. Your students can also see that there are similarities among the various grassland regions, just as there are among the rainforest areas of the world.

Another important concept that can be reviewed is that of interdependence of the world's peoples. Just as the people of the world depend on the tropical rainforests for many things, so they also depend on the grassland areas. In return, the people who live in the rainforests and the grasslands look to the rest of the world for many things that they need and want.

The "Broader View", pp. 123-124, summarizes the problems of the tropical grassland areas and also tells about some of the things the grassland people have done to solve their problems. This reading material helps to pull the unit together and applies it directly to the present-day situation. You might want your class to read this section as an oral reading assignment.

The "Questions to Think About" on p. 124 deal with the tropical grasslands of the world as a whole. These questions can be used to stimulate your students' thinking on a world-wide basis. The questions will also help your students to sort out and organize what they have learned in their study of Unit Two.

ADDING UP IDEAS

During your review, you will probably want to devote some time to summarizing the basic factual information which your students learned in this unit. The basic learnings should include most of the concepts listed below.

1. The tropical grasslands are usually located north and south of the tropical rainforests.

2. The tropical grasslands have a rainy season and a dry season. Temperatures are high most of the year.

3. The rainy season comes when the noonday sun is vertical or almost vertical. The dry season comes in the months when the noonday sun is lower in the sky

4. The people of the tropical grasslands must adapt their activities to the alternating wet and dry seasons and also to a great variability of rain from year to year.

5. The various people living in the world's tropical grasslands regions have adapted their ways of living to the alternating wet and dry seasons by:

a. Planting most of their crops at the beginning of the rainy season.

b. Raising a few crops such as millet or wheat, which are planted at the end of the rainy season since they can stand dry weather.

c. Irrigating their crops in regions where enough water can be obtained from rivers or where it is stored in reservoirs.

d. Raising cattle and driving them from pasture to pasture. When the rains fail, many cattle may die of thirst and starvation.

e. Raising coffee and tea on some fertile uplands where rainfall is more dependable.

SUGGESTED ANSWERS FOR "QUESTIONS TO THINK ABOUT", p. 124

1. The ranchers can adapt their ways of living to the grasslands more easily than the farmers for several reasons: (1) the natural vegetation of the grasslands provides food for cattle, (2) cattle can move from place to place in the dry season to find new pasture, (3) cattle can be walked to market when transportation is lacking, and (4) specail cattle have been bred that can withstand the heat and food shortages of the dry season.

2. Irrigation has been most successful in the grassland regions of India. The people of India are farmers and their religious beliefs prevent them from killing animals and eating meat. They must irrigate their land in order to raise sufficient food. Fortunately, there are many large rivers in India which provide water. In addition, the Indian people dig wells and make reservoirs to store water to use during the dry season.

3. Soil erosion is a problem because the earth becomes hard and dry during the dry season. When the rainy season comes, the rain cuts gullies in the earth and washes the soil away. In places such as east Africa, where there are too many cattle, the grass dies because it is eaten down to the roots. When this happens, there is no protection for the soil. Farmers prevent soil erosion by their methods of farming, building ridges in the fields, irrigating the land, planting cover crops to protect the soil. In some places, the number of cattle is being limited so that the grass will not be killed by overgrazing.

4. India's seasons differ from those of the other grasslands because there are three seasons instead of the usual two. In India there is a cool dry season during late fall and winter, a hot dry season in the spring, and a hot wet season in the summer.

5. Answers to this question will vary, but the opinions should be supported by reasons.

6. The people of the tropical grasslands have adapted to the alternate wet and dry seasons in many ways. Many native homes are built of adobe with steep roofs made of heavy thatch or tile. Thick adobe or mud walls are cooler in the hot season and the heavily thatched or tile roofs shed the heavy rains of the wet season. Some of the grassland people raise cattle and drive them from pasture to pasture to find food. Still other people are farmers. They must plant most of their crops at the beginning of the rainy season so that the crops will have sufficient moisture. In some areas, wheat and millet, which can withstand dry weather, are grown. In those parts of India where water can be taken from rivers or stored in reservoirs, the farmers irrigate their crops. In Brazil, the people raise coffee on fertile uplands where the rainfall can be depended upon.

WORKSHOP ACTIVITIES

"Your Geography Workshop" on p. 124 of the textbook lists several ideas for class or individual projects. Additional suggestions are given on p. 18 of this booklet in connection with Chapter 5. These suggestions can be adapted and applied to any of the grassland regions covered in this unit. They can also be expanded to pertain to the grasslands of the world as a whole.

EVALUATING THE UNIT

Your unit evaluation gives you an opportunity to measure how well your class understands the factual information, demonstrates the skills, and is developing attitudes necessary for reaching the Primary Objectives. You may want to use the textbook material, maps, drills from the manual, or your own evaluation methods in measuring your students' progress.

See also Unit Test Two in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

TEACHING UNIT THREE: HOT, DRY, AND DANGEROUS

BOOKLET #5

Your Own Look Ahead 1
Ch. 6: Lands of the Wandering Bedouins . 2
Ch. 7: Productive Deserts of the Americas 12
Feature: The Mysterious Kalahari 22
Feature: The Big Walkabout 23
Reviewing Unit Three 25

YOUR OWN LOOK AHEAD INTO UNIT THREE

In Unit Three, you will take your students through the tropical dry lands of the world. Most of the tropical dry lands of the earth are desolate regions. Yet, some archeologists tell us that man originated and thrived in such regions. For example, one of the oldest civilizations known to man flourished along the banks of the Nile River, the largest oasis in the world. Another ancient civilization sprang up and grew along the banks of the Tigris and Euphrates Rivers. Today man is still making a living, often with difficulty, in these tropical dry lands.

In Chapter 6, which deals with the tropical dry lands of North Africa and Asia, the life of the wandering Bedouins is contrasted with the life of the oasis dwellers. When your students read about the American deserts, in Chapter 7, they will see how it is possible for some deserts to be productive if certain natural factors are present and if there is enough interest and money to develop them. Your students will also learn that some dry lands contain valuable minerals, but that mining in these regions frequently depends on the demand for these minerals. Finally, in the Features, your students will see that very few people inhabit the Kalahari Desert in southwest Africa and the desert in central Australia because living is very difficult in these regions, as it is in most dry lands.

The chapters and features of this unit contain many important concepts. Some of the most important concepts have been concentrated in the six Major Questions listed below. Each question is related to one of the Primary Objectives that were stated in Booklet #1. You may want to plan your lessons around these Major Questions.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. Generalization: Most tropical dry lands contain a sparse population.	Feature (pp. 155-157), Question #1 In the Australian dry lands, why are the sheep and cattle stations so large and scattered?
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings. Generalization: People are able to make a living in tropical dry lands because they adapt to their natural environment.	Feature (pp. 153-154), Question #1 What changes have come to the Kalahari Desert in recent years? Why have these changes had little influence upon the region? Chapter 6, Question #1 In what ways do the Bedouins live in harmony with their natural environment?
Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these people. Generalization: The nations of the world use the minerals from the tropical dry lands.	Chapter 7, Question #2 In what ways has mining in the Atacama Desert been dependent upon the rest of the world?
Objective: To teach the value of natural resources and the need for making better use of them through conservation. Generalization: The conservation of water is essential if agriculture is to be carried on in tropical dry lands.	Chapter 6, Question #2 Why is the Nile River so important to Egypt? Chapter 7, Question #1 How has the conservation of water been used to make the deserts of the United States productive?

AROUSING INTEREST IN THE UNIT

To stimulate curiosity and a questioning attitude, you might have your class read the title on p. 125, "Hot, Dry, and Dangerous" and ask them what this phrase suggests to them. During the discussion, you can discover what they already know about tropical dry lands. At the same time, you can focus attention on questions to be answered as the unit study progresses.

The unit introduction on pp. 125-126 will familiarize your students with the climatic conditions of tropical steppes (semi-arid) and deserts (arid) and with some of the problems of making a living on these lands. The chart of "Climate Facts" on p. 126 contains climatic data for both desert and steppe locations. Your class can compare these extreme conditions with the climatic statistics of their local community.

To create further interest in the study of the unit, you might have your class look at the pictures on pp. 14-15, p. 127, p. 136, and p. 149. Tell your class that all of these are pictures of tropical dry lands. "Which of the pictures comes closest to your idea of a desert?" "What makes the other pictures different?" "Why do you think the pictures vary?" You might use questions such as these to stimulate some "why" and "how" thinking about tropical dry lands.

CHAPTER 6: LANDS OF THE WANDERING BEDOUINS

YOUR OWN LOOK AHEAD INTO CHAPTER 6

Recently, much attention has been focused on the tropical dry lands of Africa and Asia. These dry lands, the home of both Bedouins and oasis dwellers, have become increasingly important in the news. Refugee problems and boundary disputes between Israel and her Arab neighbors, internal unrest in Algeria, as well as extreme nationalism in Egypt have threatened to turn the area into a huge battlefield. Only through the diligent efforts of the United Nations has war been averted.

Rapid changes, attracting world-wide attention, have been taking place in this important area. As you guide your class through Chapter 6, you will be able to point out some of the basic geographic factors which have brought about these changes and which are reflected in many of the news reports from the Near East. Chapter 6 is divided into a number of short sections which will help your students with their reading.

1. "Let's Look at Maps", pp. 128-129.

2. "Wanderers on the Desert", pp. 130-131, depicts the nomadic life of the Bedouins who wander about in the desert searching for pasture and water for their sheep, goats, and camels.

3. "Life of the Bedouin Tribe", pp. 131-134, shows how aspects of the wanderer's life are conditioned by climate and how the Bedouins depend upon their camels for food, clothing, shelter, and transportation.

4. "Farms and Cities in the Oases", pp. 134-136, describes life on the oases, where agriculture is made possible by irrigation. It also describes some of the larger oases that have grown into important cities such as Damascus and Baghdad.

5. "The Nile Valley, Largest Oasis of All", pp. 136-138, illustrates how millions of Egyptians are supported by the Nile River, which furnishes water for irrigation and brings fertile soil to the valley and delta. The importance of Cairo, the largest city in Africa, is also discussed.

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FOR YOUR OWN READING

You may find the books listed below helpful in supplying background information about desert people.

George B. Cressey, Asia's Lands and Peoples,
Ch. 24, "Arabia", Ch. 25, "Iraq".
R.J. Russell and F.B. Kniffen, Culture Worlds,
Ch. 27, 28, 29, 30, 31, "The Dry Worlds".
L. Dudley Stamp, Africa: A Study in Tropical Agriculture,
Ch. 10, "Egypt and the Nile", Ch. 12, "The Sahara".
Richard Sanger, The Arabian Peninsula.

. . . .

MAJOR QUESTIONS

Two Major Questions are developed in connection with this chapter. The first question reinforces the idea of interrelationship between man and his natural environment. The second question points out the need for conserving valuable natural resources.

Primary Objective:

To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.

→

Major Question #1:

In what ways do the Bedouins live in harmony with their natural environment?

Ways in Which the Bedouins Have Adjusted to Their Environment

Occupation	Herd goats, sheep, and camels. Move from place to place in search of water and pasture. Several months of each year are spent at an oasis, where trading and social events take place.
Housing	The Bedouins live in tents made of camel's-hair cloth. These tents are easy to put up, take down, and transport. The tents are usually low so that they will offer little resistance to desert winds.
Food	The Bedouins live mainly on milk and cheese, which are easy to obtain from their herds. Sometimes the Bedouins buy grain at an oasis. They also buy a few luxuries such as tea, coffee, sugar, and rice. Meat, too, is considered a luxury because it means a precious animal must be killed.
Clothing	Most of the Bedouins' clothing is white. They wear loose-fitting, long-flowing robes to protect their bodies from the heat and to allow air to circulate through the garment. The burnoose gives warmth during cool desert nights. The headdress furnishes protection from sun, wind, and blowing sand.
Furnishings	The furnishings are simple. Cushions, rugs, and blankets are easy to transport and furnish the necessary comfort for living in a tent.
Utensils	Utensils are simple and include a few trays and bowls, a brass coffee pot, some cups and a mortar for making flour. All of these are transported easily in leather bags.
Transportation	The camel is the chief beast of burden because it is well suited to desert life. The Bedouin prizes his horses most highly because they furnish fast means of transportation when it is needed.
Customs	Hospitality is the keynote, since the nomad's life frequently depends on the hospitality of another. Even an enemy in distress is given food and shelter. When he leaves the camp,he cannot be pursued for three days.

Primary Objective:

To teach the value of natural resources and the need for making better use of them through conservation.

→

Major Question #2

Why is the Nile River so important to Egypt?

(See chart on following page.)

Reasons for the Nile's Importance to Egypt

1. The Nile River is the longest river in Africa; it is over 4000 miles long. 2. The Nile brings water from central Africa to the desert. 3. Millions of people live in the oasis formed by the Nile. 4. The Nile delta includes the most fertile land in all Egypt. 5. Nile floods are beneficial because they furnish water for irrigation and deposit rich silt on the valley floor. 6. Storage dams which make water available throughout the year have been built.	7. The rich delta stretches for 155 miles along the Mediterranean coast. 8. The Nile flows through the delta in streams which provide water for irrigation. 9. Thousands of irrigation canals distribute water throughout the delta. 10. Leading crops of the delta: long staple cotton sugar cane rice millet beans citrus fruit barley dates figs vegetables

SUGGESTIONS FOR TEACHING

In the pages that follow, you will find various suggestions and ideas for teaching Chapter 6. Many of the suggestions are aimed at encouraging your students to question and investigate and to find answers or verify their own conclusions. In addition, many of the teaching suggestions given with chapters in earlier booklets may be adapted to Chapter 6.

Arousing Interest in the Chapter

Through the unit introduction on pp. 125-126, your students were introduced to the climatic characteristics of tropical dry lands. If they examined pictures of deserts in various parts of the world, they may be wondering why some of these deserts appeared barren while others seemed to be productive. You may want to kindle their interest further by using one or more of the following suggestions.

1. You might have your class continue its observation of pictures in the textbook to find out how people make their livings in tropical dry lands. The pictures on pp. 16-17 in the pictorial introduction and those included with the chapter, on pp. 127-137, are excellent for this purpose. In these early picture studies, you can help your students to develop observation skills by asking them pointed questions. In later picture observations, you can encourage students to ask their own questions and to draw their own conclusions.

In the chart that follows, any question suggested for one picture may be asked about other pictures if it applies.

Page	Question	Suggested Answer	Probable Conclusion
16 (Small picture)	Why do you think palm trees can grow in this desert? What kind of roofs do the houses have?	Since trees need water to grow, there apparently is water here. The houses have flat roofs.	There are some places in the desert where water can be found. Flat roofs indicate that there is probably little rainfall.
(Large picture)	What animals are drinking water? Where do the people live? Why do you think this makes a good home for them? Where is the water coming from?	Camels are drinking the water. The people live in tents. The tents are easily packed when moving is necessary. The water is coming from a pipe which is probably connected to a well or stream.	Some of the people on the desert herd camels. The people live in tents.

Page	Question	Suggested Answer	Probable Conclusion
17 (Small picture)	What kind of furniture is in the tent? What are the people doing? What kind of household utensils do you see?	Furniture is not apparent. The people are seated on the ground. They are holding a conversation. A tea or coffee pot and several cups are in the foreground.	The household furnishings in the tents are very simple.
(Large picture)	Why are awnings hung across the street? What kind of clothes are the people wearing?	The awnings shade the street from the sun. The clothes are loose-fitting and mostly white.	Some people live in towns and cities.
127	What does this picture tell you about the deserts?	Looks like sand dunes with no vegetation. There are some gullies which show that a little rain may have fallen.	The desert is a desolate place.
130	What animals are drinking in this picture? Where do you think the people got the water for the bucket?	Goats are drinking water. The water was probably obtained from the oasis in the background.	Some of the desert people herd goats. Some water can be found in the desert.
132	What color is the man's clothing? How can his headdress protect him?	The clothing is white. It protects him from sun, wind, and sand.	Bedouin clothing is designed to protect people from the sun, wind, and sand.
133	What animal is shown? How is the animal being used?	The animal is a camel. The camel has a saddle on his back and is used for riding.	The camel is used for transportation.
134	This picture shows an oasis. What activity is taking place on this oasis?	The people are growing fruits and vegetables.	Oasis dwellers sometimes farm.
135	What is the source of water in this picture? For what are the men using the water?	The source is a deep well. Water is drawn to the surface in a leather bucket by means of a pulley and rope. The men are watering their camels.	Some water can be obtained from deep wells.
136	What is the man picking? Do you think this tree grows in the desert or on an oasis?	The man is picking dates from a palm tree. These trees grow on the oases.	Dates are grown on the oases.
137	How is the available water being used in this picture?	Some animals are drinking in the background, and the canal is used for irrigation in the Nile Valley.	Farming can be carried on where there is enough water for irrigation.

Once this information has been collected, you will need to remind your class that their tentative conclusions may or may not be correct. It is up to them to study further to verify or disprove their tentative conclusions.

2. You may wish to read a good description of desert life or part of an adventure story which takes place in a desert. Your Book Committee might furnish this material, or you may want to consult the Student Reading List for Chapter 6 on p. 11 of this booklet. After your class has heard this story, you might start a discussion on how people live in the steppe and desert regions. During this discussion, your students should form probable conclusions which they might then check by reading the text.

3. Interest in this chapter can be aroused if someone in the class is able to relate a first-hand experience in a desert region. Souvenirs or artifacts displayed in class usually create enthusiasm. After you have allowed enough time for class observation or listening, you might start a discussion to bring out further information about the desert people and how they make their livings.

4. Many films and filmstrips present a good introduction and overview of desert regions. You may want to choose a film or filmstrip from the Selected Audio-Visual Aids for Chapter 6 on p. 12 of this booklet.

Getting Started (pp. 127-128). Your class gets an overview of the dry lands of North Africa and Asia by means of an imaginary airplane flight from New York City to Cairo. The small inset map on p. 128 shows the route and the global relationship between Cairo and the United States. Your students can find out how long the trip will take by working out the problem stated in the picture caption on p. 128.

Let's Look at Maps (pp. 128-129). This map study will acquaint your class with the lands that are included in the desert and steppe regions of North Africa and Asia. Some of the map skills learned earlier are reviewed and some new ones are introduced.

Map Skills

	Review	New
Direction	N,S,E,W Latitude	
Distance	Scale--recognition of differences	
Location	Latitude and North Tropic	
Symbols	Political boundaries, peninsula, delta, oceans, rivers, cities, mountains	Wadies
Legend	Shading to indicate precipitation (relative differences) Shading to indicate population density (relative differences)	Hatchings to indicate deserts and steppes
Comparison & Inference	Population densities of various areas compared Rainfall of 2 regions compared Inference about climate from location	Inference about differences in population density Inference about water supply of rivers

Suggested Answers for Map Study

1. These tropical dry lands lie between 3°N and 38°N latitude. The location near the North Tropic indicates that these dry lands get direct rays from the sun during part of the year, and that the temperature is probably hot.

2. This activity requires student observation.

3. The Arabian Sea and the Persian Gulf lie to the south and east of the Arabian Peninsula. The Great Sandy Desert lies in the southern part of the Arabian Peninsula.

4. The Red Sea, the Mediterranean Sea, and the Atlantic Ocean surround parts of North Africa which have dry lands. The countries of North Africa which contain dry lands include Spanish Sahara, French Morocco, French West Africa, French Equatorial Africa, Algeria, Tunisia, Libya, Egypt, Sudan, Eritrea, French and British Somaliland, Ethiopia, and Somalia. The Atlas Mountains border the Sahara Desert on the northwest.

5. The rainfall is heavier in the steppe regions than it is in the deserts.

6. By following the directions given in the text, students learn the meaning of wadies and their symbol.

7. Baghdad is the large city located in Iraq. The Indus River flows through the Thar Desert.

8. The population density of Arabia is much less than that of the Nile Valley. The fact that the Nile River furnishes a dependable supply of water accounts for the fact that more people can make a living in the Nile Valley than in Arabia.

Skim Reading for Main Ideas (pp. 130-134). Your class has already had numerous opportunities to practice close reading for details in the preceding chapters. Reading for details, however, is only one of several valuable reading skills. Sometimes it is necessary to skim a great deal of material in a short space of time to gather general information. Perhaps you would like to try some skim reading with your class, using the text material on pp. 130-134.

You can instruct your class to read only the titles and sub-titles on those pages together with the first two sentences of each section. The objective in skimming these pages is to see how fast your students can find out something about the life of the Bedouins.

With *reluctant students, you might allow five minutes for skimming pp. 130-134 to gather essential information. **Average students will probably not require more than four minutes, while ***advanced students should be able to skim these pages in three minutes.

At the end of the allotted time, you might ask each group of students to write down some of the things they learned from this hasty reading. Their lists might include items such as these:

1. Bedouins wander in the desert for nine or ten months of the year seeking water and pasture for their animals.

2. The Bedouins must move to a different pasture when the animals have eaten all the grass.

3. Herdsmen take care of the camels.

4. When all the grasses and water holes are dried up during the hottest part of the year, the Bedouins gather at an oasis.

5. The Bedouin's animals provide him with food, clothing, and shelter.

6. The Bedouin's chief food is milk; but if money is available, he can obtain luxuries such as bread, dates, rice, tea and salt.

7. The clothing is loose and flowing. Most people wear a burnoose.

8. Tents are made of bought or homemade cloth.

9. Bedouins are very hospitable.

10. Camels are the center of the Bedouin's life.

11. Bedouins value their horses even more than they do their camels.

Frequently in skimming, your students may read a sentence or two which increases their curiosity to read farther for an explanation. You may want your students to reread pp. 130-134 for details, using the questions in the "Checking Up" exercises on p. 131 and p. 134 as guides.

Finally, you might want to explain to your class that both types of reading are useful, each for a different purpose. When a general overview is needed, skimming is helpful; but when details are desired, all material must be read carefully.

Reading For Comparison (pp. 134-136). Your students have already learned that there are oases in the desert and that the Bedouins spend part of each year at these oases. As your students read pp. 134-136, they will discover that still another group of people live at the oases all year round. These people, the oasis dwellers, make their livings as irrigation farmers or as tradesmen. The ways of life of the Bedouins and the oasis dwellers are very different, yet each group has adapted to the dry lands climate and each depends on the other for certain things.

You might want to have your students compare these two groups of people to discover their similarities and differences, and to find out how and why they are dependent on each other. The chart below furnishes you with some ideas for such a comparison. One-star items indicate probable answers from *reluctant students. **Average students should be able to add the two-star items. ***Advanced students may be able to give all the answers.

2 stars

	Bedouins	Oasis Dwellers
Housing	*tent (movable) **camel's hair tent ***low tent	*mud houses (permanent) **flat roofs, adobe ***shaded narrow streets, houses on poor land
Food	*milk and cheese **bread and meat ***luxuries of rice, tea, coffee, and sugar	*farm products **cereal grains, dates, vegetables ***apricots, peaches, almonds, olives, nuts, wheat, barley
Clothing	*white, long, flowing **burnoose and use ***headdress and use	*white, long, flowing ***when oasis dwellers work in the fields, they sometimes shed their burnoose
Occupation	*herders **sheep, goats, camels ***horses	*farmers **"three storied" agriculture using irrigation ***there are many different ways of securing water: natural springs, wells, wadies, and pipelines
Riches	*camels and horses **camels furnish food, shelter, clothing, & transportation ***use camel's milk, meat, hide, hair, and back	*date palms **date palms furnish many neccessities of life ***building material, fire wood, food, drink, mats, bowls, baskets, string, shoes, stuffing, and trade goods
Trade Items	*camels and handicrafts **wool, leather goods, and camel's hair ***goat's hair, rugs	*farm products and luxuries **clothing, food, weapons ***entertainment, dates, cereal, grains, coffee, tea, sugar

When such a comparison chart has been completed, your students will have recalled how each of these groups has adjusted to the hot, dry climate. You might want to point out the fact that the Bedouins spend about two months of each year visiting an oasis in order to trade their goods for the things they need. The oasis dwellers produce or can acquire many of the things the Bedouins need. The Bedouins and the oasis dwellers have a basis for trade since each group has something the other wants or needs.

Reading About the Nile Valley (pp. 136-138). In guiding your class in their study of "The Nile Valley, Largest Oasis of All", you might want to use again some of the reading suggestions given previously. The map on p. 137 and the "Checking Up" questions on p. 138 focus your students' attention on the importance of the Nile Valley.

Reviewing The Chapter. You will probably want your class to review the geographic vocabulary learned in this chapter by using the "Words to Understand" section on p. 138. The "Questions to Think About" are helpful in stimulating thinking about the important aspects of the chapter as a whole. The "We and They" exercises will guide your students in comparing tropical dry lands with their own local community.

SUGGESTED ANSWERS FOR CHAPTER 6

"Checking Up", p. 131

1. The Bedouins wander about the desert for many months in search of pasture and water for their flocks of sheep and goats and herds of camels. The whole tribe splits into many small groups because the desert pastures are too scanty to feed many animals.

2. Scouts are needed to locate new pastures and a good water hole before the camp is moved. When the new pasture is reached, the Bedouins pitch their tents, unpack their belongings, dig or clean out the well, and settle down for a few days or weeks.

3. The Bedouins enjoy their stay at the oasis because it gives them an opportunity for social life and trading. At the oasis, Bedouins sell or trade some of their camels and sell wool, goat's hair, camel's hair, and woven rugs. They buy supplies of grain, dates, clothing, weapons, and a few luxuries such as rice, tea, sugar, and coffee.

"Checking Up", p. 134

1. The desert climate accounts for many things in the life of a Bedouin. His clothing is usually white to reflect the sun and loose fitting to allow air to circulate through it. The burnoose can be adjusted for warmth when the night air is cool. The head cover can be adjusted to cut out the sun's glare and to protect the nose, mouth, and eyes from blowing sand. Because they are constantly on the move, the Bedouins have few utensils and their furnishings consist of pillows, rugs, and quilts, all of which can be packed and transported easily. Bread is made by placing the dough under the sand and building a small fire over it. After 45 minutes a browned loaf of bread is dug out. The people are very hospitable and will give food and shelter to anyone, even enemies, since life in these vast expanses may depend on hospitality. After a visitor has spent three days in one camp, he is considered unwelcome because food is scarce.

2. Bread and meat are considered luxuries by the Bedouins. They must trade goods or use money to buy grain to make bread, and they must kill their precious animals to get meat.

3. The camel furnishes the Bedouin with milk and meat for food. Camel's hide is used to make bags, buckets, and bottles. Camel's hair is used to stuff pillows or to weave soft cloth and sturdy ropes. The camel is also the chief means of transportation and carries the Bedouin, his family, and his belongings. The Bedouin values his horses more than his camels because they are useful when fast travel is desirable, especially when hostility is involved.

"Checking Up", p. 136

1. At some oases, deep wells must be dug to reach the water. When the oases are located in wadies, the underground streams are tapped. In still other places, underground tunnels carry water to the fields from a mountain stream or underground sources.

2. In "three-story" farming, the top "story" contains the crown of date palms; on the second "story" may be found fruit or nut trees; and on the ground, wheat, barley, or vegetables are grown. The most valuable crop is the date palm. It provides the farmer with building material, food, drink, nuts, bowls, baskets, string, shoes, stuffing for camel's saddles, and goods for trade. A farmer's wealth is measured by the number of his date palms and by his water rights.

3. The chief industries in Damascus include the manufacture of silk, cotton and wool textiles, as well as the making of steel. The location of Baghdad was ideal for a city because it was at on oasis where the east-west desert trade route and the north-south river route crossed.

"Checking Up", p. 138

1. The floods of the Nile are used for irrigation and fertilization of the land. Crops are sometimes planned to take advantage of the flood. Today, dams are used to store some of the flood water and to make water available throughout the year.

2. The delta soil is composed of fine silt from the uplands of Africa. This soil is much richer than the sandy soils of the desert or the better soils of irrigated oases. The leading crop grown in the delta region is high-grade cotton.

3. Cairo is the largest city in Africa. It is often called the Crossroads of the Desert because people from all parts of the desert and the Mediterranean region have been meeting and living there for thousands of years. The city handles a great deal of river traffic and is connected by railroad with inland points.

"Questions to Think About" p. 138

1. Camels are said to be a necessity rather than a luxury because they provide the Bedouin with food, clothing, shelter, and transportation.

2. The Bedouin's clothing is suited to desert conditions because it is usually white so that it can reflect rather than absorb the sun's rays. It is long and flowing to provide protection from the sun and the wind; but it is also loose enough to allow the air to circulate through it. The burnoose can be adjusted to keep the wearer warm during the cool desert nights. The head cover shades the eyes, and offers the face and neck protection from the sun, wind, and blowing sand.

3. Travelers in the desert see only a few Bedouin tents in any one place because a whole tribe will split up into small bands seeking pasture lands and water holes which are scattered and not sufficient to graze large flocks and herds.

4. The Bedouin judges his wealth by the number of camels and horses he owns. The oasis farmer measures his wealth by his water rights and the number of yielding date palms he possesses.

5. Egypt is sometimes referred to as the "Gift of the Nile". Through the centuries, yearly floods have deposited rich soil on the valley floor. This soil enables almost any crop to grow. Annual floods add to the water supply, which is necessary for irrigation in the valley and delta. Egypt can support a dense population only because of the waters from the Nile River.

6. The rich soil or silt found in the Nile Valley was transported and dumped by the Nile River. The river is used for irrigation both on the delta and in the valley. Huge storage dams retain some of the annual flood waters, making water available throughout the year.

"We and They" p. 138

These questions are best answered by a direct comparison between your community and the tropical dry lands of North Africa and Asia.

EVALUATION EXERCISES

To Measure Your Students' Understanding of Factual Knowledge

Directions: Read each of the following statements. Determine whether they are true or false. Place an X in front of any statement that is false.

(X) 1. Oasis dwellers earn their living by herding.

2. Baghdad is located in an oasis formed by the Tigris River.

3. Textiles are manufactured in Damascus.

(X) 4. Camels are mild-mannered animals.

(X) 5. Most of the houses in an oasis are built of lumber or bamboo.

6. Cairo is the largest city in Africa.

(X) 7. Bedouins are very hostile, especially to their enemies.

To See Whether Students Understand How the Bedouins are Dependent Upon Their Camels

Directions: A Bedouin might own all of the articles listed below. Place an X after any item that might have been supplied by a camel.

black tent (X)
steamed barley
cheese (X)
leather bucket (X)
wheat bread
strong coffee
leather bag (X)
sweet tea
burnoose (X)
roast meat (X)
pillow (X)
woven rug (X)
figs and dates
quilt (X)
rice

To See Whether Your Students Understand The Importance of Water Conservation in the Nile Valley

Directions: Fill in the blanks in the paragraph below. The following list furnishes you with answers which are arranged numerically and alphabetically. There are more answers in the list than you will need. See if you can choose the correct answer to fill each of the blanks in the paragraph.

100
1,000
4,000
camels
canal
clear
crops
dams
delta
fertile
flood
hundreds
Mediterranean
millions
red
source
thousands

The Nile River is over (4,000) miles long. It carries water and fine soil from the uplands of Africa to the (Mediterranean) Sea. The yearly floods have deposited (fertile) soil in the river valley and have built up a (delta) at its mouth. The land can be irrigated and many (crops) can be grown. (Dams) have been built to store some of the (flood) water for use during the rest of the year. (Millions) of people depend upon the wise use of the waters of the Nile River.

STUDENT READING LIST FOR CHAPTER 6

NON-FICTION

**Brittain, M., Arab Lands. Holiday, 1947. This book tells about the Arab world in Asia and Africa. It points out a shift from a nomadic economy to one centered around oil.

*Reed, M., The Sky is Blue, Harcourt, 1940. The explanation as to why the world has deserts appears in Chapter XII.

**Taylor, A., Egypt, Holiday, 1953. The land, people, and problems of present-day Egypt are presented and discussed.

FICTION

*Davis, R., Pepperfoot of Thursday Market, Holiday, 1941. A pet donkey and a road construction project prove adventuresome for three Berber boys.

**Farley, M., The Black Stallion Returns, Random House, 1945. A search for a kingdom and for a black stallion reveals a land of intrigue on the desert.

**Fleming, W., The Lost Caravan, Doubleday, 1935. Sun, sand, and an occasional oasis provide a background for this story of the Sahara Desert.

*French, H., Lance of Kanana, Lothrop, 1932. Kanana, who had never thrown a lance, proves he is a hero as he saves Arabia from conquest.

**Henry, M., King of the Wind, Rand McNally, 1948. A boy's great devotion to an Arabian thoroughbred leads him on a long journey.

**Hoffman, E., White Mare of the Black Tents, Dodd, 1949. Omar loses his white horses to an enemy. Its return involves a great decision. This is a tale of spying, capture, and rescue.

*Stinetorf, L., Children of North Africa, Lippincott, 1943. This is a collection of short stories about adventures of children in the desert of North Africa.

*Tietjens, E., Boy of the Desert, Coward-McCann, 1928. A journey of an Arab boy into the desert of North Africa provides a realistic story.

***Wren, P., Beau Geste, Lippincott, 1925. A search for a stolen sapphire leads to a remote fort in the Sahara and a clash with the French Foreign Legion.

AUTOBIOGRAPHY

***Najafi, N., Persia Is My Heart, Harper 1953. The author tells about home life and custom in Persia.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 6

Ali Of Saudi Arabia, 1951 (fs, color, 47 fr, #69). Life in Arabia with a young boy and a nomadic tribe of Bedouins.

Arab Middle East, 1955 (mp, color, b&w, sound, 17 min, #45). Portrays the heart of the Middle East: Lebanon, Syria, Jordan, and Iraq. Deals with the future of the Arab countries.

Backward Civilization, 1937 (mp, b&w, sound, 22 min, #23). A contrast between the primitive life of the Berbers of north Africa and the machine age.

Desert Nomads (French Morocco), 1949 (mp, b&w, sound, 20 min, #65) and 1954 (fs, b&w, 45 fr, #65). Desert tribes wander from place to place in search of food and water for themselves and their animals.

Desert Venture, 1947 (mp, color, sound, 28 min, #61). Shows how American business enterprise and oil have brought about changes in the life and customs of the people of Saudi Arabia.

Dwellers In Hot Dry Countries, 1939 (mp, b&w, sound, 9 min, #22). Characteristics of desert countries and influence of mountains on wind and rainfall.

Egypt, 1951 (fs, b&w, 29 fr, #69). A family cultivates ten acres of land in the Upper Nile Valley.

Egypt; 1955 (fs, b&w, 40 fr. #6). Modern Egyptian economics, society, and education. Shows relationships with other people.

Egypt and The Nile, 1954 (mp, color, b&w, sound, 16 min, #23). Depicts the geography, people, cities, and chief crops of Egypt.

How Desert People Live, 1938 (mp, b&w, sound, 11 min, #42). Contrasts life among the wandering tribes of the Sahara Desert with people from colder deserts of the world.

Iran (Between Two Worlds), 1954 (mp, color, sound, 14 min. #23). People of the desert, their crafts, art objects, and natural resources.

Mediterranean Africa, 1952 (mp, color, sound, 12 min, #23). A historical and geographical survey of Tunisia, Algeria, and Morocco.

Nile River Valley and the People of the Lower River, 1950 (mp, b&w, sound, 17 min, #2). Features the lower half of the Nile River from the arid plains to the delta.

Saudi Arabia, 1953 (fs, b&w, 65 fr, #44). Photographs showing geographic characteristics and ways of life. Special emphasis is placed on the influence of oil and economic programs on the standard of living.

Story of the Desert, 1938 (mp, b&w, sound, 40 min, #42). Man's ceaseless struggle with the desert in Egypt and elsewhere in the Sahara.

Wanderers of the Desert, 1954 (mp, color, sound, 10 min, #23). Activities of a desert patrol, and Bedouins in the rocky hills and barren landsof Arabia.

CHAPTER 7: PRODUCTIVE DESERTS OF THE AMERICAS

YOUR OWN LOOK AHEAD INTO CHAPTER 7

In the United States, water control and conservation have converted small sections of tropical dry land into fertile oases. However, the irrigated land is only a small fraction of the millions and millions of acres of tropical dry land. Most of the dry land is still a wasteland and totally unsuited for agriculture. Your students may know that our government has used large sections of this wasteland as sites for experimental purposes. Many of the sites chosen for atomic explosions, rocket firing, and aircraft testing are located in our tropical dry lands. White Sands Proving Ground, New Mexico, and Edwards Air Force Base, California, with their new buildings, complicated equipment, and hundreds of employees present a strange contrast to a bleak landscape.

Chapter 7 is divided into sections. These sections describe four different areas of tropical dry land in North and South America.

1. "Let's Look at Maps", pp. 140-141, 146, 148, 150-151. Each of these map studies deals with a different dry lands region - the southwestern United States, Mexico and Lower California, Peru, and Chile.

2. "Developing Our American Deserts", pp. 142-146, explains how water conservation has helped to develop the Imperial Valley of California and the Salt-Gila River Valley in Arizona.

3. "The Tropical Dry Lands of Mexico", pp. 146-147, tells about life in Lower California, the Sonoran Desert, and the eastern deserts of Mexico.

4. "The Natural Oases of Peru", pp. 147-150, describes how the snow-fed rivers flowing from the Andes Mountains to the Pacific Ocean have made the desert valleys of Peru productive.

5. "The Chilean Desert, Dry but Rich", pp. 150-152, explains how copper and nitrate have played an important part in the economy of the Atacama Desert.

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FOR YOUR OWN READING

You may wish to consult one of the following books to add to your knowledge of the tropical dry lands of the Americas.

Preston James, Latin America, Ch. 5, "Peru", Ch. 7, "The Atacama".
C. Langdon White and E. J. Foscue, Regional Geography of Anglo-America, pp. 332, 335-339, 354-357.
J. Russell Smith and M.O. Phillips, North America, Ch. 27, "The Semi-arid Southwestern Inter-montane Plateaus", Ch. 28, "The Great American Desert".
Richard L. Light, The Face of South America, pp. 209-238, "Peru".

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MAJOR QUESTIONS

This chapter contains several important ideas that can be emphasized by asking a few Major Questions. You may wish to stress these Major Questions with your students. Answers are given for your reference and use in the classroom.

Primary Objective		Major Question #1
To teach the value of natural resources and the need for making better use of them through conservation.	→	How has the conservation of water been used to make the deserts of the United States productive?

	Salt-Gila Valley	Imperial Valley
Natural Advantages	Rich soil, high and even temperatures, plenty of sunshine, and a long growing season.	Rich soil, warm temperatures, much sunshine, and a long growing season.
Other Advantages	Good transportation by railroad, highway, and air. Good location near large centers of population.	Good transportation connections with the rest of the U. S. by railroad, highway, and air. Good location near large centers of population.
Irrigation	Served by the Roosevelt Dam and other dams on the Salt and Gila Rivers.	Served by the Hoover Dam and other dams near Lake Mead and on the Colorado River.
Crops	Cotton, winter lettuce, cantaloupes, citrus fruit, and alfalfa.	Citrus fruit, winter lettuce, peas, beans, grapes, cantaloupes, dates, alfalfa, barley, and sorghum.

Primary Objective		Major Question #2
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these people.	→	In what ways has mining in the Atacama Desert been dependent upon the rest of the world?

Early Conditions	Change	Present Conditions
After 1860, Chilean nitrates were much in demand for making explosives and fertilizers. Huge quantities of nitrates were exported to the U. S. and Europe.	A German scientist discovered a method of making nitrate from the air.	Nations of the world have adapted the new method of making nitrates and now produce their own supply. They no longer depend on faraway Chile. Some of the Atacama mines are now closed.
Between 1850-1870, Chilean copper mines shipped ore to many nations of the world.	New copper deposits were discovered in the U. S. and elsewhere. These ores were easier to obtain and cheaper to transport.	Many of Chile's copper mines closed. Due to the huge demand for copper in recent years, many have reopened.

SUGGESTIONS FOR TEACHING

This chapter on the tropical dry lands of the Americas deals with four separate dry lands regions and shifts from one region to another very rapidly. In your teaching, you will need to make sure that none of your students becomes confused. The text material is divided in such a way that a box of "Checking Up" questions follows the discussion of each region and separates it from the next. A map study appears at the beginning of each section to help you orient your students.

Arousing Interest in the Chapter. The southwestern part of the United States contains some tropical dry land. You or some of your students may have had an opportunity to visit this region, or perhaps you live there. Since students usually enjoy hearing about personal experiences, you may want to use some of your own or your students' experiences in securing interest in the chapter.

Additional suggestions for arousing interest in the tropical dry lands of the Americas are given below.

1. The Southwest is rich in colorful history. You may want to relate to your class a little of the history of the land before it was developed by people of the United States.

The Indians that inhabited this section of the United States lived very much like the people who live in the desert regions of Africa and Asia. There were two main tribes of Indians, the Pueblos and the Navahos. The descendants of these Indian tribes still live on huge reservations in the states of Arizona and New Mexico.

The Pueblo Indians were the oasis dwellers. They made use of the rivers and fertile valleys for irrigation farming. Many of the early Spanish settlers adapted the Pueblos' irrigation methods to grow their own crops. The indians built their houses of sun-baked mud bricks. These houses had flat roofs, similar to those of the oasis dwellers in the Sahara and Arabian Deserts.

The Navaho Indians were the wanderers of the desert. Their way of life was similar to that of the Bedouins of Africa and Asia. These nomadic Indians grazed sheep and goats. They, too, treasured their horses, which they obtained from the early Spanish explorers. The Navajo Indians built their homes, or "hogans," from skins, sod, grass, and branches. Hogans were easy to build and could be abandoned when the tribe had to move to find new pasture and water for their animals.

The Spanish were the first Europeans to settle in this part of the United States. They adjusted to their natural environment much as the Indians did. Some farmed along the rivers or grazed cattle and horses, while others set up trading centers. These early Spanish traders shipped their goods to other parts of the country by covered wagon.

After the Gold Rush of 1849 boosted the population of California, and after the building of a transcontinental railroad through this southern route, settlers from other parts of the United States began to arrive. These settlers had a difficult time because Eastern farming methods were unsuccessful in the Southwest, the climate was harsh, and the Indians were hostile. Little activity developed except grazing of sheep and cattle. The population remained sparse, and New Mexico and Arizona did not become states of the United States until 1912.

Today, however, many spots in this American desert are thickly populated. Farmers in these areas produce huge harvests of crops at a time when a large portion of the United States is blanketed in snow or is suffering from cold weather. "What has happened to change parts of this desert into rich farm land?" ""What has happened to make people want to live in this desert area?" Questions such as these may stimulate a discussion among the members of your class.

2. There are many films showing the picturesque Southwest. You may want to use one of the films listed under "Selected Audio-Visual Aids for Chapter 7" on p. 22 of this booklet. Films or filmstrips can be used to give an overview of the region, to stimulate questions, and to point up problems for future study.

3. An adventure story dealing with the Indians, with the early history of the Southwest, or with present-day life in the American dry lands may also encourage questioning. Some of the books listed under the "Student Reading List for Chapter 7" on p. 21 of this booklet, may interest your students.

Getting Started (pp. 139-140). On pp. 139-140, your students are introduced to the tropical dry lands of North America through the windows of their imaginary airplane. On p. 147 and p. 150, the flight continues, passing first over the Peruvian Desert and later over the Atacama Desert in Chile. The small inset map on p. 140 shows the direction and various routes described in the text.

Let's Look at Maps (pp. 140-141, 146, 148, 150-151). There are four separate map studies in this chapter. The first one, on pp. 140-141, covers the tropical dry lands of the United States. The one on p. 146 deals with the tropical dry lands of Mexico. Before beginning your study of the Peruvian Desert, you will probably want to use the map study on p. 148. Finally, the map study on pp. 150-151 can be used when your students are ready to study about the Atacama Desert. As in previous map studies, you might encourage your students to use wall maps and globes in addition to the maps in their textbook.

In the map studies in this chapter, many map skills are reviewed and reinforced. Some new skills are also presented.

Map Skills

	Review	New
Direction	N, E, S, W, Latitude	
Distance	Recognition of differences in scale (insert maps)	
Location	Latitude North Tropic South Tropic	
Symbols	Political boundaries, rivers (and their courses), lakes, oceans, cities, deltas, mountains, continents, peninsulas.	State boundaries, dams, railroads
Legend	Hatching to indicate deserts Hatching to indicate steppes Shading to indicate precipitation & population density Shading to indicate elevation Color to indicate rainforest	
Comparison & Inference	Rainfall of various areas compared Population densities compared Inference about population density around rivers Inference about climate from location	Inference about location of mining centers Rainfall of different climatic regions compared Inference about the presence of streams

Suggested Answers for Map Study, pp. 140-141

1. The dry lands on this map are between 23°N and 35°N. Most of the dry lands are north of the North Tropic.

2. In the United States, the desert regions are found in the states of Texas, New Mexico, Arizona, Nevada, and California. The state of Arizona has a rather large desert area. Nevada and Texas have small desert areas.

3. On the Colorado River, the Hoover Dam is the farthest north. The lake behind the dam is called Lake Mead. The Colorado River flows into the Gulf of California.

4. You will need to make sure that your students examine the inset map of the California desert.

5. The light shading in the desert regions on the rainfall map indicates that the rainfall in this area is very light.

6. The areas around the rivers are more densely populated because water is available for irrigation farming. Farmers can prosper in these areas and produce enough food to feed many people.

Suggested Answers for Another Look at Maps, p. 146

1. Encourage your students to follow the directions carefully.

2. The Gulf of California separates the peninsula of Lower California from the mainland of Mexico. The topography of Lower California appears to be mountainous. The map does not show any large rivers in Lower California.

3. The topography of the desert region east of the steppe area appears to be flat.

4. The directions for this question involve active participation and observation.

5. The rainfall in the Mexican deserts is about the same as the rainfall in the deserts of the United States. Lower California and the Sonoran Desert are less densely populated than the Imperial Valley of California.

Suggested Answers for Another Look at Maps, p. 148

1. The desert area along the western coast of South America stretches through Peru and Chile. An area of varied mountain climates lies to the east of the Peruvian Desert, and a tropical rainforest region lies east of the mountains.

2. The Peruvian Desert lies between 5°S and 20°S.

3. The Andes Mountains are so high that they are capped with snow throughout the year. The melting snow furnishes water for the rivers.

4. The rainfall map shows that there is much less rainfall in the desert area of Peru than in the mountains or in the rainforest regions.

5. The people of Peru can make a living at the oases because water is available for irrigation farming.

Suggested Answers for Another Look at Maps, pp. 150-151

1. The location of the Chilean desert near the South Tropic indicates that this region gets direct rays of the sun during part of the year. The temperature is probably very hot.

2. The mining cities seem to be Chuquicamata, Copiapó, and Potrerillos. The latitude of Iquique is $20\frac{1}{2}^{\circ}$S, Antofagasta $23\frac{1}{2}^{\circ}$S, and Chanaral 26°S.

3. In this exercise, your students must follow directions in order to do the activity suggested.

4. This exercise requires student participation.

5. The directions given in the text involve an activity.

Reading About Our American Deserts, (pp. 142-146). To help your students in their reading of the chapter, you might wish to cover the four dry lands regions of the Americas on four different days. Your*reluctant students might follow the textbook rather closely, developing the difficult vocabulary and discovering the answers to the "Checking Up" questions. The reading material for the first set of "Checking Up" questions, on p. 146, is rather long. You may want to ask additional questions to help this group of students with their reading.

Your **average students might supplement their reading by securing further information about the southwestern part of the United States. Perhaps they will enjoy finding out more about Hoover Dam, Lake Mead, Pueblo Indians, Navajo Indians, Roosevelt Dam, the Petrified Forest, the Mojave Desert, the All-American Canal, and White Sands Proving Ground. Additional informatinn about these topics can be found in newspapers, magazines, encyclopedias, and library reference books. Some teachers like to assign topics such as these for special student reports.

Some of the topics listed above may also interest your ***advanced students, but these students should be able to do more extensive research. More difficult topics might also prove challenging to this group. Possible topics might include the growing of alfalfa and sorghum, people who live in Lower California, irrigation projects on the Rio Grande, silver mining, life in the deserts of Peru, plantation farming in Peru, growing of wool in Peru, uses of nitrates, mining in the Atacama Desert, and present-day importance of the nitrates in the Atacama Desert. If you have your ***advanced students prepare special reports, all of your students can benefit from this research.

Practice in Outlining. You may have had your class try some skim reading to get the main ideas contained in Chapter 6. Now, you might like to give them some practice in making an outline. If your students have not previously studied the principlos of outlining, you can guide them in the following way. First, have them read pp. 142-146, dealing with the tropical dry lands in the United States. After they have completed their reading, have them suggest the main theme of this entire section. Their answer will probably be very similar to Major Question #1 for this chapter (i. e., conservation of water has made the United States' deserts productive). This idea can then become the title of the outline.

In this first attempt at outlining, it may be helpful if the outline is developed as a class activity and is written on the board. The*reluctant students may have difficulty in seeing the relationships between the major subdivisions and the outline title. However, these students will probably be able to fill in many of the details.

The **average and ***advanced groups should be able to find at least three large subdivisions of the outline title. These might be: I. Problems; II. The Salt and Gila Valley in Arizona; III. The Imperial Valley in California.

As the outline developes and is written on the board, it might look like this:

How Water Conservation Has Made the Tropical Dry Lands of the U.S. Productive

I. Problems
    A. High temperatures
    B. Desert climate
    C. Floods
    D. Storage of water
    E. Irrigation of more land

II. The Salt and Gila Valley Arizona
    A. Natural advantages
        1. Rich soil
        2. Even temperatures
        3. Plenty of sunshine
        4. Long growing season
    B. Other advantages
        1. Good transportation
            (a) Railroads
            (b) Highways
            (c) Airplanes
        2. Location near densely populated areas
    C. Irrigation
        1. Water from Salt and Gila River
        2. Served by Roosevelt Dam and other dams
            (a) Furnishes water
            (b) Furnishes electricity

D. Crops
    1. Cotton
    2. Lettuce
    3. Cantaloupes
    4. Citrus fruit
    5. Alfalfa

III. The Imperial Valley, California
A. Formation
    1. Once arm of Gulf of California
    2. Cut off by Colorado River Delta
    3. The sea dried up, except Salton Sea
B. History
    1. 1900 the Colorado River was tapped for water
    2. Farming was successful
    3. 1904 a flood on the Colorado ruined the farmland
C. Natural advantages
    1. Rich soil
    2. Even temperatures
    3. Plenty of sunshine
    4. Long growing season
D. Other advantages
    1. Good transportation
        (a) Railroads
        (b) Highways
        (c) Airplanes
    2. Nearness to population centers
E. Irrigation
    1. Hoover Dam and other dams control the floods of the Colorado River
    2. Excess water is stored in Lake Mead
        (a) Furnishes water
        (b) Furnishes electricity
F. Crops
    1. Citrus fruits
    2. Lettuce
    3. Peas
    4. Beans
    5. Grapes
    6. Cantaloupes
    7. Dates
    8. Alfalfa
    9. Barley
    10. Sorghum

To help your *reluctant students, you might vary the outlining procedure somewhat by furnishing all the supporting details of the outline as you write it on the board. Supply the information for the Arabic numbers and the small letters. Leave the title as well as the entries for the Roman numerals and capital letters blank. In trying to fill in the main entries, your *reluctant students may come to see the relationship between the details and larger ideas that are being developed.

Reading About Other American Tropical Dry Lands (pp. 146-152). As your class reads about the other tropical dry lands of the Americas, you might want to give them additional practice in outlining, using the suggestions furnished above. The three map studies are vital steps in the reading of pp. 146-152 and should not be overlooked. The "Checking Up" questions on pp. 147, 150, and 152 furnish convenient guides for your students' reading.

Reviewing the Chapter (pp.152-153). The "Words to Understand," "Questions to think about," and "We and They" comparisons can be used as starting points for the review of Chapter 7. In addition, you might like to use the Major Questions suggested for this chapter.

SUGGESTED ANSWERS FOR CHAPTER 7

"Checking Up", p. 146

1. The early settlers in the American deserts realized that they had three problems: (1) how to control the floods, (2) how to store the flood water for years of low water, and (3) how to irrigate more land.

2. Hoover Dam and Lake Mead control floods on the delta of the Colorado River and in the Imperial Valley. More land can be brought under cultivation because the stored-up water can be used as it is needed.

3. The growing season in the Imperial Valley is about 353 days long. This means that two and sometimes three crops have time to ripen and be harvested in the same year.

"Checking Up", p. 147

1. Barriers to the development of Lower California are: (1) the rugged nature of the land, (2) isolation from Mexico due to the Gulf of California, (3) few transportation facilities, and (4) the restrictive tariff of the United States.

2. Recently, the governments of Mexico and the United States signed a water rights treaty which allows the farmers in the Sonoran Desert to use more of the water of the Colorado River for irrigation. The Mexican government, in return, allows the United States the use of more water from the Rio Grande.

3. The two chief occupations in Mexico's eastern desert region are cattle ranching and silver mining.

"Checking Up", p. 150

1. The northern oases of Peru produce sugar cane, the central oases raise cotton, and the southern oases raise crops chiefly for home use.

2. The northern oases are the finest in Peru because they have the largest and most dependable water supply, enjoy the brightest sunshine, and have the least fog from the ocean.

3. Lima is an interesting city because it is really two cities in one, a modern city and an old city. Lima is important because it is the capital of Peru and the commercial, art, and education center as well.

4. The only important oasis city in southern Peru is Arequipa. It is an export center for wool sheared from the sheep raised in the mountains.

"Checking Up", p. 152

1. There is less rainfall in the Atacama Desert then in any other tropical dry land of the world. There are certain places in this desert where rain has never fallen.

2. The nitrate basins in the Atacama Desert were once large lakes. Ages ago, the water in these lakes evaporated, leaving rich chemical deposits on the old river beds. Nitrate and copper are the leading minerals from the Atacama Desert.

3. A way has been discovered to make nitrate from the air. Nations have developed this means of obtaining nitrate rather than depending on faraway Chile. Atacama copper mining also declined when new deposits were discovered in the United States from which ore could be shipped more easily and cheaply. However, the demand for copper is so high that some Atacama copper mines have reopened.

4. There are two types of communities in the Atacama Desert, the mining communities in the interior and the ports along the coast. The mining settlements ship their minerals to the ports for export and, in turn, depend on the ports for everything from food and clothing to heavy mining machinery.

"Questions to Think About", pp. 152-153

1. The Imperial Valley is sometimes called "the American Egypt" because (1) it is dependent upon the water from a single river, the Colorado, and (2) the fertile valley was formed by the Colorado River. In a similar way, Egypt is dependent on the Nile, whose flood waters deposited fertile soil in the Nile delta.

2. During the winter, our deserts furnish the rest of the United States with citrus fruits and fresh vegetables, such as lettuce, peas, beans, carrots, and dates.

3. The Mexican desert is not as developed as the desert region in the United States because there are only a few short streams for irrigation, transportation is poor, and U. S. tariff restrictions hinder trade. Recently, Mexico and the United States signed a treaty exchanging some water rights on the Colorado River for those on the Rio Grande. The people of the Sonoran Desert may be able to improve their condition through new irrigation projects.

4. The Peruvian Desert has many irrigated oases. The Atacama has only a few very small ones. Most of the people of Peru live in the desert, while very few people of Chile can live in the Atacama. Mining is important in the Atacama.

5. Nitrates are used to make explosives. Today, they are also used to make fertilizers. When scientists discovered how to make nitrate from the air, the demand for Chilean nitrate decreased. As a result, the nitrate industry of Chile declined.

6. To develop mines, people are needed to do the mining. Many kinds of machinery, power, water, food, housing, and recreation for the miners must be provided. Desert conditions are such that all machinery, food, and housing must be brought in from other areas. This costs a great deal of money. Also, a water supply must be found. Often the water is brought by pipeline from sources many miles away. Transportation facilities must be built. The heat, dust, and sand are hard on both people and machinery.

"We and They," p. 153

1. This question may be used to stimulate a class discussion. As your class talks over the different phases of this problem, you may want to make two points clear. (1) Mexico has a right to some of the water of the Colorado River, and (2) there is little danger that the Imperial Valley will not have enough water.

2. The answer to this question involves personal opinion. Your students should have reasons to substantiate their answers.

EVALUATION EXERCISES

To Check on Your Students' Factual Knowledge

Directions: Build a pyramid by answering the seven questions below. The answers to each question is a word or number that will fill all of the blanks available.

1. 5	1. How many states in the United States have tropical dry lands?
2. N M	2. What is the abbreviation for one of these states?
3. d r y	3. What word may be used to describe deserts? ("Hot" or "dry")
4. P e r u	4. What is the name of a country in South America that has tropical dry lands?
5. A n d e s	5. What is the name of the high mountains in South America?
6. H o o v e r	6. Which of the American dams has caused the formation of Lake Mead?
7. n i t r a t e	7. What valuable mineral is mined in the Atacama Desert?

To See Whether Students Understand Differences Among Desert Regions

Directions: Scenes from various desert areas are described below. Try to decide which desert areas are described and give the locations.

1. A rich green field of alfalfa hay. (United States)

2. A mining car filled with nitrate. (Atacama Desert, Chile)

3. A herd of camels near a group of tents. (North African or Asian Desert)

4. A rich green valley surrounded by high mountains. (Peruvian Desert)

5. A large delta crisscrossed by irrigation canals. (Nile Valley, Egypt)

6. A line of railroad cars filled with carrots. (United States)

7. A town where there has never been any rain. (Atacama Desert, Chile)

8. An oasis where the farmers are using "three story" agriculture. (North African or Asian Desert)

9. A large power plant at a dam. (United States)

10. A miner digging silver ore from a mine. (Mexican Desert)

To See Whether Your Students Understand Factual Information

Direction: Unscramble each sentence so that it forms a true statement about the American dry lands.

(Note: For this exercise, you may want to use a flannel board -- a large piece of plywood or other material covered with flannel cloth. The words in each sentence can be lettered on separate cards. A piece of flannel or sandpaper glued to the backs of the cards will make them stick to the flannel board. Scramble the cards on the flannel board and then ask a student to rearrange the cards to form a true statement.)

1. Is the River Hoover The Colorado on Dam. (The Hoover Dam is on the Colorado river.)

2. a California is Lower peninsula.
(Lower California is a peninsula.)

3. the chief the is Farming occupation Valley in Imperial.
(Farming is the chief occupation in the Imperial Valley.)

4. of capital The Lima is Peru.
(The capital of Peru is Lima.)

5. source has River The in Mountains Rocky the Colorado its.
(The Colorado River has its source in the Rocky Mountains.)

To See Whether Your Students Understand Why Some Lands Are Productive and Others Unproductive

Directions: Choose the answer which correctly completes each statement. Only one answer may be used for each statement.

1. Some parts of the desert in the U.S. are productive because of

   a. the scattered thunderstorms in the summer
   x b. a dependable supply of water
   c. lower temperatures than in most dry lands
   d. all of these

3. The Mexican desert and steppes have produced little because of

   a. the lack of minerals
   x b. the lack of irrigation projects
   c. the poor soil
   d. all of these

5. Much of the land in the southwestern United States is still unproductive because of

   a. lack of interest by the government
   b. lack of interest by the people
   x c. impossibility of irrigation
   d. all of these

2. Lower California is unproductive because of

   a. U. S. tariff restrictions
   b. an isolated location
   c. a lack of transportation
   x d. all of these

4. The desert of Peru is productive because of

   x a. the source of water in the Andes Mountains
   b. the nearness to markets
   c. the rapid transportation system
   d. all of these

6. Mining in the Atacama Desert depends on the world's demand for minerals because

   a. mining is very expensive in the desert
   b. transportation is expensive
   c. the owner wants to make a profit
   x d. all of these

STUDENT READING LIST FOR CHAPTER 7

NON-FICTION

*Disney, W., Living Desert, Simon-Schuster, 1954. Creatures of American desert regions come to life through beautiful color photography.

**Henry, M., Mexico in Story and Picture, Whitman, 1941. All of Mexico is reviewed in this account of our neighbor south of the border.

FICTION

**Blackburn, E., One Bit of Land, Dutton, 1955. A Mexican family returns to its ancestral land in the Imperial Valley of California.

***Breckenfeld, V., Maggie, Doubleday, 1954. Maggie left her comfortable life in San Francisco to marry a mining engineer and live in the wilds of Mexico.

**Forster, L., Desert Storm, Dodd, 1955. Arizona provides a background for this present-day story of an Apache Indian boy and his horse.

***Johnson, E., and Peck, A., Big Bright Land, Messner, 1947. Twins from a small town find life on their new cattle ranch in Arizona very different from life in their native New England.

**Newcomb, C., Silver Saddles, Longmans, 1943. Facing desert, thieves, and the unknown, a boy attempts to deliver a valuable horse to his father's ranch in Mexico.

**Tarshis, E., Village That Learned to Read, Houghton, 1941. Pedro decided to run away from school to be a bull fighter because he thought it more exciting than learning his ABC's.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 7

Adobe Village (Valley of Mexico), 1949 (mp, b&w, sound, 20 min, #65). Illustrates methods of agriculture and village life south of the border.

Atacama Desert, 1943 (mp, b&w, sound, 18 min, #65). Life and industry in the desert of northern Chile, where rich nitrate deposits are found.

Chilean Nitrate -- Gift of the Desert, (mp, color, b&w, sound, 10 min, #35). Describes mining, refining, and transportation in the Atacama Desert.

Climate and Resources, 1953 (mp, b&w, sound, 11 min, #54). Mexico's wide variety of crops and her great extremes of weather and soil conditions are shown and discussed.

The Desert, 1947 (mp, color, b&w, sound, 10 min, #11). Flora and fauna of the Mojave and Colorado deserts.

Great American Desert, (fs, 34 fr, #59). Views of the Mojave and Colorado deserts. Stresses the reclamation of land.

Life in the Desert, 1954 (mp, color, sound, 11 min, #23). Emphasizes climatic conditions and desert life. Shows how animals get their food and protect themselves against their enemies.

Life in Hot, Dry Lands (California), 1949 (mp, color or b&w, sound, 10 min, #20). Demonstrates the battle of survival waged by starving plant life, animals, and human beings of the desert.

Living Desert Series, 1955 (set of 5 fs, color, 48 fr, #23). "Plant Life of the Desert", "Reptiles of the Desert", "Mammals of the Desert", "Small Creatures of the Desert", "Survival in the Desert."

Northwestern Mexico, 1951 (mp, b&w, sound, 11 min, #68). Scattered scenes of irrigation and farming methods on a large cotton farm.

Southwestern States, 1942 (mp, b&w, sound, 11 min, #23). Irrigation, stock raising, mining, and oil extracting are among the occupational activities shown. The exchange of goods and services with other sections of the country is stressed.

Water for Dry Land (U.S.A., The Southwest), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 44 fr, #65). The transformation of desert lands through man's triumph in controlling the water supply.

FEATURE: THE MYSTERIOUS KALAHARI (PP. 153-154)

As an introduction to this feature, you might point out to your students that there are still some parts of the world about which we know very little. One of these mysterious and unexplored areas is the Kalahari Desert in southwestern Africa. In the Kalahari, the native Bushmen have never grazed an animal or tilled the soil. They secure their living by skillful hunting.

Recently, Boers have moved into the region to graze their livestock. Gold and diamonds have been discovered, and a few irrigation projects have been started. However, until better transportation can be developed, these changes will have little effect upon the region as a whole.

MAJOR QUESTION

The Major Question that may be asked about this feature deals with man's relationship to his natural environment. In this case, changes in the environment have taken place, but these changes have not greatly influenced the lives of the people who inhabit the Kalahari Desert.

PRIMARY OBJECTIVE		MAJOR QUESTION
To show the interrelationship between man and his natural environment, and how man has learned to change, control, and direct his surroundings.	→	What changes have come to the Kalahari Desert in recent years? Why have these changes had little influence upon the region?

Inhabitants	Changes in the Environment	Drawbacks
Bushmen, hunters, Boers, ranchers	Discovery of diamonds and gold Building of irrigation projects	The region is isolated from the rest of the world because of a lack of transportation.

……

FOR YOUR OWN READING

The following book will give you additional background material about the Kalahari Desert.

D. H. Davis, The Earth and Man, Ch. 22, pp. 368-372, "The Kalahari Desert".

……

SUGGESTIONS FOR TEACHING

The map on p. 154 shows your students the location of the Kalahari Desert. The picture on p. 154 shows what this desert region looks like. As your class reads about the Kalahari Desert, you will probably want them to answer the "Checking Up" questions on p. 154. Words such as Boer and Bushmen can be added to your students' vocabulary lists.

SUGGESTED ANSWERS FOR FEATURE, pp. 153-154

"Checking Up", p. 154

1. The Bushmen of the Kalahari manage to live by hunting. They are expert trackers because of their hunting experiences. They are watchful, have a keen sense of hearing, are persistent, and can endure hardships. They can also track animals without dogs and are able to locate lost people and water when no one else can.

2. The Boers are the descendants of the Dutch pioneers who first settled in South Africa. They have started to move into the Kalahari to take advantage of the grass for grazing cattle.

3. Life in the Kalahari Desert is changing because gold and diamonds have been discovered and in a few places irrigation projects have been started. But until the Kalahari region is connected to the outside world by good transportation, major changes will come slowly.

FEATURE: THE BIG WALKABOUT (pp. 155-157)

Australia is almost as large as the United States, but most of this continent is covered by steppes and desert. The Australian steppes and deserts are among the least populated areas of the world.

Your students will be able to see, however, how man has been able to establish ranches around the edge of the desert and make a living by utilizing huge areas of grazing land for a limited number of animals.

MAJOR QUESTION

You may wish to organize your lesson around the Major Question below.

PRIMARY OBJECTIVE

To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.

MAJOR QUESTION

In the Australian dry lands, why are the sheep and cattle stations so large and scattered?

✓

Reasons

1. The stations are located mainly on the fringe of the desert.
2. Each station has a huge tract of grazing land to feed the stock.
3. The rancher must secure water from a spring, an artificial reservoir, or by drilling a deep well.
4. Travel and transportation are very difficult.
5. The stock is driven to market along special routes set up by the government. These routes take advantage of the water supply.
6. Wool is transported by oxen, camels, or trucks. ✓

. . . .

FOR YOUR OWN READING

Additional background information can be found in the following books.

D. H. Davis, The Earth and Man, "The Big Walkabout".

Ernestine Hill, The Australian Frontier, pp. 237-318.

Griffith Taylor, Australia, Ch.VI , "Desert Lands in Australia".

. . . .

SUGGESTIONS FOR TEACHING

To supplement the reading material about the tropical dry lands of Australia, you may wish to plan a map study based on the large map on p. 155. Your students may also be interested in finding out why this feature is entitled "The Big Walkabout". The "Checking Up" questions on p. 157 furnish excellent reading guides. Vocabulary words to be stressed might include Aranda, stations, and stock route.

SUGGESTED ANSWERS FOR FEATURE, pp. 155-157

"Checking Up", p. 157

1. The Australian desert is called the Big Walkabout because the native tribes refer to their wanderings on the desert as "walkabouts". The desert is a lonely land because so few people live there. Also those who have succeeded in making a living in this dry land live far apart. Travel is difficult because water is scarce, and much of the area is unexplored. There are only a few roads and one railroad. Most people travel by air or by jeep or on horseback along trails in the sand.

2. The ranchers secure their water from springs, artificial reservoirs, or by drilling deep wells.

3. A stock route is a route used by ranchers to drive their cattle on their way to market. In Australia, the stock routes take advantage of all the available sources of water. If the Australian government had not laid out such routes, many ranchers could not get their cattle to market. The routes enable ranchers to travel long distances across treacherous territory from their cattle stations to railroads.

STUDENT'S READING LIST FOR FEATURE, pp. 155-157

NON-FICTION

**Irwin, W., & Irwin, D., Australia and New Zealand, Macmillan. This account of the land "down under" tells about the steppe and desert sections of the continent.

FICTION

**Clark, D., Boomer, Viking, 1955. A kangaroo is the hero of this story about Australia.

**Collins, D., Bush Holiday, Doubleday, 1949. Martin, an American boy, has an exciting adventure on a cattle station in the Australian bush.

**Davison, F., Red Heifer, Coward-McCann, 1934. Avoiding capture was the chief problem of a spirited young cow roaming with some wild cattle on the Australian range.

**Patchett, M., Tam the Untamed, Bobbs, 1955. In this exciting tale of life on a lonely Australian cattle station, Tam, a beautiful but savage horse, can be managed only by his young mistress.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE, pp. 155-157

Australia, 1949 (mp, b&w, sound, 11 min, #23). Presents an over-all view of Australia, covering various climatic regions including prairies and bush.

Bushman Goes Home, 1947 (mp, b&w, sound, 10 min, #8). An insight into the way of life in the "outback" Australia.

Expedition to Ayers Rock, 1953 (mp, b&w, sound, 10 min, #8). Australian school boys explore the sparsely settled center of the continent.

Touring Through The Center, 1946 (mp, color, sound, 10 min, #8) A journey through Australia's little known interior.

REVIEWING UNIT THREE

PLANNING THE REVIEW

A review is sometimes most successful when the material can be approached from a new standpoint. Having your students investigate the questions, "Why are some tropical dry lands productive?" and "Why are some tropical dry lands unproductive?" is one way of helping them to organizing the material in Unit Three.

To find answers to these two questions, your class might prepare comparison charts for the various dry land regions of the world. Ask your students to make a list of the tropical dry lands that they consider productive. (With *reluctant students, it may be advisable to furnish this list.) Next, ask your class to give reasons why they consider these deserts productive. A conclusion can then be drawn which may be applied to any tropical dry land region. Finally, by considering all the possible conclusions, your students should be able to answer the question, "Why are some tropical dry lands productive?"

The completed chart might look like this:

Productive Deserts

Desert	Reason	Conclusion
Nile Valley	The Nile River has built up rich soil in the valley and delta. The waters of the river can be stored for use in irrigation. The government has been able to afford irrigation projects.	Rich soil, available water supply, and money for irrigation, flood control, and storage projects help make deserts productive.
Imperial Valley Salt and Gila Valleys	Rich soil is plentiful. Rivers with sources in high mountains flow through the land. Transportation has been developed. Area is near large markets created by dense population. Dams for flood control, electricity, and water storage have been built by the government. Irrigation is used widely.	Rich soil, a good source of available water, good transportation systems, nearness to market, money for constructing dams, and irrigation projects help make this area a productive desert.

Desert	Reason	Conclusion
Peruvian Desert	Protected desert valleys are crossed by short rivers from the Andes Mountains, which furnish water for irrigation. These valleys are near the Pacific Ocean.	Available water for irrigation through most of the year and the nearness to ocean transportation make this a productive desert.
Atacama Desert	Even though this is the driest desert in the world, man can prosper here because of the deposits of nitrate and copper. There is easy access to the Pacific Ocean. World demand for these minerals can make expensive desert mining profitable.	Even though a desert may have few of the essentials for making it productive, the presence of minerals can make a desert very productive.
Arabian Desert	A large part of the world's oil is secured from this region.	The presence of minerals can make a barren desert productive.

Generalization: Tropical dry lands can be productive if they have rich soil, a dependable source of water, money to construct storage dams and reservoirs, are near large markets, and have good transportation systems. The presence of minerals and customers to buy them can make a desert productive even though mining is expensive.

A similar chart on unproductive deserts may be prepared in the same way.

Unproductive Deserts

Desert	Reason	Conclusion
Sahara	Few permanent streams, little capital available, and few discovered minerals.	The lack of a good source of water or the absence of minerals keeps this area unproductive.
Mexican	Isolated location, lack of transportation, lack of irrigation projects, and tariff laws of the U. S.	A good location, irrigation systems, and a good market are necessary for productivity.
Australian	Isolated location, lack of transportation, and lack of large permanent rivers.	A good location, irrigation systems, and a good market are necessary for productivity.
Kalahari	Even though diamonds and gold have been discovered, the lack of transportation hinders the development of the area.	Good transportation seems to be an essential factor of productivity.

Generalization: The lack of large permanent rivers, money, minerals, and transportation facilities cause tropical dry lands to be unproductive.

"Reviewing Unit Three" on pp. 157-158 furnishes some other material that you can use in the review lesson. "A Broader View" on pp. 157-158 explains that irrigation cannot solve the water-shortage problem in all the tropical dry lands of the world. There is not much hope for change in many of the tropical dry lands. In many areas, people will continue to have difficulty coping with the problems imposed by the natural environment. "Questions to Think About" on p. 158 point up many of the important geographic relationships which you may want your class to remember.

ADDING UP IDEAS

After you have completed your review of Unit Three, you might like to guide your class in a comprehensive review of the three low-latitude climates — the tropical rainforests, tropical grasslands, and tropical dry lands. In a comprehensive review covering these three climatic regions, the following topics might be reviewed:

1. Location of each climatic region in relation to the equator and to each other.

2. The outstanding characteristics of each climatic region.

3. Some of the adaptations that people have made to the natural environment of each region.

4. Problems of living in and developing each region.

5. Contributions that the people of each region have made or are making to the rest of the world.

As part of this review, you might also want to check on your students' growth in vocabulary and map reading skills.

Suggested Answers for "Questions to Think About," p. 158

1. Some tropical dry lands are more thickly settled than others because they have a dependable water supply which can support more people, or because of the presence of minerals which are economical to mine.

2. Genesis 13:1-6 "And Abram went up out of Egypt, he, and his wife, and all that he had, and Lot with him, into the south. And Abram was very rich in cattle, in silver, and in gold. And he went on his journeys from the south even to Beth-el, unto the place where his tent had been at the beginning, between Beth-el and Hai; Unto the place of the altar, which he had made there at first; and there Abram called on the name of the Lord. And Lot also, which went with Abram, had flocks, and herds, and tents. And the land was not able to bear them, that they might dwell together: for their substance was great, so that they could not dwell together." The parts of this passage that might have reference to living in steppe and desert regions are underlined. Additional passages can be found in Genesis 24:10-11; 43-46; 61-65.

3. Inventions such as the airplane, automobile, trucks, air conditioning, and refrigeration are making life easier in the desert.

4. Life in tropical deserts is often hard and dangerous because there is usually a shortage of water and food. The temperatures are very high, and there is danger of becoming lost.

5. Some valuable products we get from tropical dry lands are: oil, nitrate, copper, long-staple cotton, dates, figs, leather, camel's hair, wool, winter lettuce, grapes, cantaloupes, and other vegetables grown during our winter.

6. The intense heat of tropical deserts is due to the fact that in the summer the sun is high in the sky, in many places directly overhead. There are no clouds in the sky to shut out the strong sunlight. The sand and bare rocks become very hot and, like radiators or stoves, radiate heat.

7. Heavy rain storms do little to relieve the dryness of the desert since the water runs off too quickly. Also, the rains last only a short time, usually around thirty minutes.

WORKSHOP ACTIVITIES

Some of your students or your classroom committees may want to work on the activities that are listed under "Your Geography Workshop" on p. 158. In addition, you might like to suggest some of the following activities.

1. On a sand table or somewhere in the school yard, construct a model of one of the deserts. Study a physical map in order to have the topography correct. Use sand, gravel, rocks, and fine soil. You might also plant grass or cacti.

2. Make a boomerang, a spear, a model of a Bedouin tent or of an Arabian oasis house.

3. Out of modeling clay, make models of some of the animals found in tropical dry lands.

4. Dress a doll in clothing like that worn by a Bedouin. Be prepared to explain the use of the various articles of clothing.

5. Make an exhibit showing the various methods of transportation used in the different tropical dry lands of the world.

EVALUATING THE UNIT

In your unit evaluation, you will want to see how well your class understands the ideas emphasized in the Major Questions suggested for Unit Three. You may want to construct test items that check on your students' skills in map work, vocabulary, reading, and picture observation. Your evaluation should measure understanding of the factual information as well as development of the skills and attitudes necessary to accomplish the Primary Objectives listed in Booklet #1.

See also Unit Test Three in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

BOOKLET #6

Your Own Look Ahead 1
Ch. 8: Around the Mediterranean Sea . 2
Ch. 9: California, the Golden Land. . 12
Feature: Cream of the Land. 22
Feature: Land of the Little Karroo. . 23
Feature: Wheat for a Continent. . . . 24
Reviewing Unit Four. 25

YOUR OWN LOOK AHEAD INTO UNIT FOUR

In the first three units of The World Around Us, your class studied about regions with unfavorable environments where man made his living with great difficulty. Unit Four acquaints your students with the sunny semitropical areas of the world, where a favorable environment exists and where man and nature work well together.

The sunny semitropical climate is found in lands around the Mediterranean Sea, in California, central Chile, southwestern Africa, and southern Australia. Most of these regions are densely populated because the sunny semitropical climate, with its mild temperatures, abundant sunshine, and pleasant weather conditions, appeals to mankind. Because the climate in all of these regions is like that of the lands around the Mediterranean Sea, geographers sometimes refer to this type of climate as Mediterranean climate.

As you guide your students in their study of Unit Four, you may wish to ask some Major Questions about the chapters and features in this unit. The following diagram shows the relationship between the Primary Objectives of teaching geography, listed in Booklet #1, and some Major Questions that may be asked.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings. Generalization: People in sunny semitropical lands are able to take advantage of favorable surroundings.	Chapter 8, Question #1 How has the Mediterranean farmer been able to work successfully with his natural environment? Chapter 9, Question #1 How have the people of California taken advantage of their natural environment?
Objective: To develop a real interest in worthwhile leisure activities such as travel, reading, lectures, museum visits, and hobbies which will result in a better understanding of the lands of the world, the people of the world, and their occupations. Generalization: Sunny semitropical lands have many features that attract tourists.	Chapter 8, Question #2 Why does the Mediterranean area attract many tourists each year?
Objective: To so acquaint students with their own country so that they will have a better knowledge and understanding of our position in the world today. Generalization: In the United States, many people have gone to live in the sunny semitropical section.	Chapter 9, Question #2 In what ways are the people of California attempting to solve their problems?
Objective: To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. Generalization: Many people live in the favorable environment of the sunny semitropical lands.	Feature (pp. 190-193), Question #1 In what ways is the sunny semitropical section of Chile the most prosperous part of the country? Feature (pp. 193-195), Question #1 What types of people live and work in the sunny semitropical region of Africa? Feature (pp. 195-197), Question #1 How is southern Australia able to produce the continent's wheat supply?

AROUSING INTEREST IN THE UNIT

Pages 22-25 of the pictorial introduction can be used to introduce this unit. You might want your class to reread these pages and examine the pictures. As they study this material, your students will begin to see some of the many advantages this climate offers to man.

You might then have your students look at the unit title on p. 159, "Sunshine For Sale". A discussion can be started by asking "How can sunshine be sold?" Your class will no doubt see the connection between this title and the tourist trade.

Next, you might have the class read the unit introduction on pp. 159-160. The map on p. 159 shows the widely scattered areas of the world that have the sunny semitropical climate. The relationship between this climatic region and others can be seen on the World Climate Map on pp. 422-423. The text on pages 159-160 reveals some of the characteristics of sunny semitropical lands. By using the chart of "Climate Facts" for Rome, Italy, on p. 160, your students can compare the sunny semitropical climate with the climate of your local community.

The sunny semitropical climate has most of its rainfall during the winter. Because little water is available during the best growing season, farming is difficult. You might have some of your **average and ***advanced students try to find out why this area has drought during the summer and rainfall during the winter.

During the spring and summer, the climate is similar to the climate of tropical dry lands. Your students will know that this means high temperatures and little rain. During the winter, the area is crossed by westerly winds which blow across large water bodies and bring rain.

CHAPTER 8: AROUND THE MEDITERRANEAN SEA

YOUR OWN LOOK AHEAD INTO CHAPTER 8

A warm climate, bright sunshine, clear skies, and blue water have attracted men to the Mediterranean area of Europe, Asia, and Africa for many centuries. In this favorable environment, the necessities of life have been fairly easy to obtain even though the lack of water in summer has sometimes been a difficult problem. Man has had the time and energy to devote to other pursuits, such as art, music, government, religion, and leisure activities.

In this chapter, your students will see how the people around the Mediterranean Sea have learned to take advantage of their environment. They will also learn how the ancient Greeks developed many of the basic ideas of democracy and contributed ideas about architecture, literature, and laws which have been handed down to us. The Romans, a little later, added to our knowledge of architecture, justice, and art. The Christian religion also had its beginning in this area.

To facilitate reading, the chapter is divided into several sections.

1. "Let's Look at Maps", pp. 162-163, 171-172.

2. "Lands of Hillside Farms , pp. 164-167, tells about terracing and zonal farming on the hillsides around the Mediterranean Sea.

3. "Towns and Villages on the Hills", pp. 167-171, describes life in a Greek Village. This section also explains why most villages are built high on the hillsides and how the people take advantage of the delightful climate by carrying on many of their activities out-of-doors.

4. "Ancient Cities with Famous Names", pp. 171-174, explains why Rome, Athens, Jerusalem, and Istanbul are tourist attractions and enumerates many of the ideas which these ancient cities have contributed to our culture.

. . . .

FOR YOUR OWN READING

You may want to refer to one of the following books to broaden your own knowledge about the Mediterranean area.

Norman J. G. Pounds, Europe and the Mediterranean, Ch. 23-27, 29.
George D. Hubbard, Geography of Europe, "Lands Having Mediterranean Climate", pp. 77-220.

MAJOR QUESTIONS

Chapter 8 contains several important ideas which can be stressed by asking Major Questions. The Major Questions suggested below contribute to a realization of the Primary Objectives. The supporting data which may be used to answer the Major Questions is given for your convenience and use in the classroom.

Primary Objective		Major Question #1
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.	→	How has the Mediterranean farmer been able to work successfully with his natural environment?

Practice	Reason
Terracing of hillsides	There is a scarcity of land and every bit of land must be used, even steep slopes.
Irrigation	Since the dry season comes during the warmest part of the growing season, the farmer must irrigate some of his crops.
Interplanting	The land shortage makes it necessary to grow crops between rows of tree crops, enabling the land to produce two crops at once.
Winter Crops	Barley and wheat are planted in the winter because they can stand cool, damp weather.
Zonal Farming	Each crop is planted in a different zone or elevation on the hillside so that the plants take advantage of the proper soil and climatic conditions.
Raising Stock	Sheep, goats, donkeys, and mules are the leading domestic animals because they require little water and eat dry, scanty pasturage. Many are driven to mountain pastures in the summer.

Primary Objective		Major Question #2
To develop a real interest in worthwhile leisure activities such as travel, reading, lectures, museum visits, and hobbies which will result in a better understanding of the lands of the world, the people of the world, and their occupations.	→	Why does the Mediterranean area attract many tourists each year?

Places	Reasons for Tourist Trade
Countries: Spain France Italy Greece Turkey Israel Cities Marseilles Rome Athens Jerusalem Instanbul	The countries have a mild climate, interesting historical sites, fine scenery, beautiful buildings, famous art museums, theaters, opera houses, concert halls, fine shops, and well-known restaurants. Perhaps here people feel that they are standing face to face with the beginnings of our culture and our civilization. From the ancient Greeks, we obtained basic ideas about democracy. We also inherited many of their ideas about literature, architecture, art, science, and law. We still read some of their poetry and laws. From the Romans we gained many ideas about our system of laws and courts of justice. We learned much about architecture, building of highways, bridges, and aqueducts. The Romans also contributed to art and literature. Christianity had its origin in the Holy Land. In the old city of Jerusalem, Jesus Christ lived and worked. In the Mediterranean area, the early church had its beginning and has outlasted all of the empires. Rome is the religious center of the Catholic Church. East meets West in the city of Istanbul, which is renowned for its beautiful architecture.

SUGGESTIONS FOR TEACHING

Many of your classroom lessons dealing with the sunny semitropical lands around the Mediterranean Sea can be planned around the two Major Questions suggested for Chapter 8. Some specific suggestions are given for teaching the new concept of zonal agriculture. There is also a section containing ideas for planning a student panel discussion.

Parts of many small countries are included in the sunny semitropical region around the Mediterranean Sea. Sometimes students have difficulty in distinguishing between regions and countries. Therefore, you may find it necessary, from time to time, to re-emphasize the fact that this region takes in parts of many small countries and not just one particular country.

Arousing Interest in the Chapter. Before going into a detailed study of Chapter 8, you might devote some time to an introduction and discussion of the lands around the Mediterranean Sea. Some of the suggestions are given below.

1. Travel posters advertising tourist attractions in the Mediterranean area are available at no charge from many steamship lines and airlines. You may also be able to secure some from your nearest travel agency. Often the embassies of Mediterranean countries distribute material of this type. Securing these posters could be a project for one of your classroom committees. It would involve letter-writing or other communication skills.

After you have secured several posters, display them on the bulletin board or attach them with masking tape to the wall above the chalkboard. By having these posters on display for several days before introduction of the chapter, you may be able to arouse a certain amount of student curiosity.

If your students have shown interest in the posters, you may want to base your introductory remarks on the travel posters. "Where are the places described on the posters?" "Why do you think people might want to go there?" "Who lives in these places?" "How do they make a living?" "Would you like to go there?" "Why?" Questions like these can be used to get a class discussion started.

Some teachers find that their students can give many reasons why tourists visit these lands. Your class may be interested in keeping a list of reasons which can later be compared with those listed in the chapter.

2. Perhaps the parents or grandparents of some members of your class came from one of the sunny semitropical countries around the Mediterranean Sea. Special interest can be created if native costumes are modeled in the classroom or if folk dances and folk songs can be seen and heard.

3. Many of these countries are in the news, and you may want to use current events to secure student interest.

Getting Started (pp. 161-162). Your students are transported to the sunny semitropical area around the Mediterranean Sea by an imaginary flight to Rome. An air view of some of Rome's ancient ruins appears on p. 162. The inset map shows the global relationship between Rome and the United States. The arrow indicates the route taken on the imaginary flight. By working out the simple problem in the picture caption, your students will learn that their jet-powered airplane took 8½ hours to make the flight to Rome.

Let's Look at Maps" (pp. 162-163, 171-172). The map study for Chapter 8 is divided into two parts. The first is found on p. 162 and refers to the maps on p. 163. The second map study appears on pp. 171-172 and also refers to the maps on p. 163. In this two-part map study, your students will be able to examine many of the physical aspects of the Mediterranean region and its important cities.

The following chart lists the previously learned map skills which are reviewed and reinforced as well as the new skills which are introduced.

Skills	Review	New
Direction	N,S,E,W Latitude	
Distance	Scale--recognition of differences	
Location	North Tropic (relative location) Countries and cities	
Symbols	Political boundaries, continents, oceans, peninsulas, seacoast, mountains, cities, islands	Canal, strait
Legend	Shading to indicate elevations Shading to indicate population density Shading to indicate precipitation (in inches)	Hatching to indicate sunny semitropical lands
Comparison & Inference	Population of various areas compared	Inference about best means of transportation Inference about coastal cities Inference about importance of city locations Inference about cities and density of population

Suggested Answers for Map Study, pp. 162-163

1. The sunny semitropical lands lie on the continents of Europe, Asia, and Africa. They are between 32°N and 45°N latitude. All of these areas are north of the North Tropic.

2. The countries or parts of countries which have sunny semitropical climate include Portugal, Spain, France, Italy, Yugoslavia, Albania, Greece, Bulgaria, U.S.S.R., Turkey, Syria, Lebanon, Israel, Jordan, Libya, Tunisia, Algeria, Spanish Morocco, and French Morocco. Egypt is the only country along the Mediterranean Sea which does not have this climate. Portugal, Spain, Italy, Greece, and Turkey are all located on peninsulas.

3. The Balearic Islands, Corsica, Sardinia, Sicily, Crete, and Cyprus are islands in the Mediterranean Sea. The Strait of Gibralter leads to the Atlantic Ocean. The Bosporus leads to the Black Sea. The Suez Canal leads to the Red Sea. These outlets are important because all ships that enter or leave the Mediterranean Sea must pass through one of these outlets.

4. Some of the mountain ranges near the Mediterranean Sea include the Sierra Nevada, Pyrennes, Alps, Apennines, Dinaric Alps, Pindus Mts., Taurus Mts., and the Atlas Mts. The surface of the Mediterranean lands is mountainous.

5. Travel in this region is easier by sea because the mountains make land travel difficult.

6. The average annual rainfall for most of the lands around the Mediterranean Sea is between 20"-40".

7. According to the population map, Portugal, Italy, and Greece are the most densely populated.

Suggested Answers for "Another Look at Maps," pp. 171-172

1. Lisbon is in Portugal. Valencia and Barcelona are in Spain. Marseilles is in France. Florence, Rome, and Naples are in Italy. Athens is in Greece. Istanbul is in Turkey. Jerusalem is in Israel. Tunis is in Tunisia. Algiers is in Algeria.

2. Lisbon, Valencia, Barcelona, Marseilles, Naples, Athens, Istanbul, Tunis, and Algiers are located on the seacoast. Since travel is difficult by land, cities along the seacoast have the easiest access to transportation, and they are closest to the ocean trade routes. Rome is located in the center of the Italian peninsula, an excellent location for a capital. Istanbul is located on the Bosporus, which connects the Mediterranean Sea with the Black sea. It is also located at a point where Asia and Europe meet. This city handles much of the trade that takes place between the two continents, as well as the trade to and from the Black Sea.

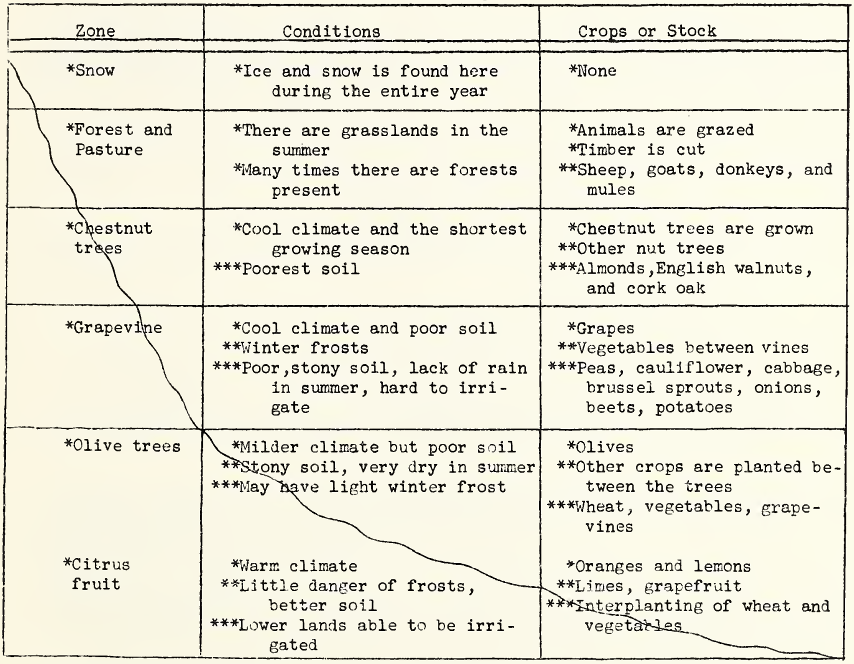
3. The northern Mediterranean lands are more densely populated. This is true because they are farther from the desert climate of North Africa and closer to the rich central section of Europe.

Using a Diagram to Explain Zonal Farming (pp. 164-167). As your students read pp. 164-167, they may have difficulty in visualizing the different zones of agriculture on Mediterranean hillsides and mountains. The picture on p. 166 may help to some extent. But your students will understand the importance of zonal farming only if they realize that temperatures drop between three and five degrees every one thousand feet of altitude. Thus, a difference in altitude may mean the difference between having frost or not having frost on a particular step of a hillside.

After your class has read pp. 164-167 and completed the "Checking Up" exercise on p. 167, you may want to make the concept of zonal farming clearer by using a diagram. This diagram may be used to summarize the reading or may be presented as a part of a separate review lesson.

The following diagram and chart can be drawn on the board or mimeographed on sheets of paper to be distributed to your students. As you develop the diagram, from the bottom up, have your students fill in the information for each agricultural zone. The stars indicate the material that may be expected from your *reluctant, **average, and ***advanced students. (Note: Due to space limitations, the slope of the hillside in the diagram below has been distorted. As you construct your own diagram, you can draw the hill with a more natural slope.)

Zonal Farming



Zone	Conditions	Crops or Stock
*Snow	*Ice and snow is found here during the entire year	*None
*Forest and Pasture	*There are grasslands in the summer *Many times there are forests present	*Animals are grazed *Timber is cut **Sheep, goats, donkeys, and mules
*Chestnut trees	*Cool climate and the shortest growing season ***Poorest soil	*Chestnut trees are grown **Other nut trees ***Almonds,English walnuts, and cork oak
*Grapevine	*Cool climate and poor soil **Winter frosts ***Poor,stony soil, lack of rain in summer, hard to irrigate	*Grapes **Vegetables between vines ***Peas, cauliflower, cabbage, brussel sprouts, onions, beets, potatoes
*Olive trees	*Milder climate but poor soil **Stony soil, very dry in summer ***May have light winter frost	*Olives **Other crops are planted between the trees ***Wheat, vegetables, grapevines
*Citrus fruit	*Warm climate **Little danger of frosts, better soil ***Lower lands able to be irrigated	*Oranges and lemons **Limes, grapefruit ***Interplanting of wheat and vegetables

Reading About Mediterranean Towns and Villages (pp. 167-171). The reading on pp. 167-171 enumerates many of the geographic factors which influence town and village life in the sunny semitropical lands around the Mediterranean Sea. You may want to emphasize these geographic relationships graphically by having your students make a two-column chart. In the first column, your students can list customs and ways of life; in the second column, the reasons for the items in Column I can be given. The three "Checking Up" questions on p. 171 will re-emphasize the outstanding geographic relationships in this section.

Planning a Panel Discussion (based on pp. 171-174). A panel discussion gives your students an opportunity to direct the lesson. The panel consists of a moderator and several speakers. The rest of the class has an opportunity to practice listening, discussion, and questioning skills.

Each panel member gives a short report about some aspect of a problem. After these reports, the panel discusses the problem. The listeners are encouraged to ask questions and to participate in the discussion. The moderator, besides introducing the panel, handles the questioning and discussion period to make sure that the students' contributions relate to the problem. At the end of an allotted period of time, the moderator closes the discussion by summarizing the contributions that have been made.

You will need to aid and direct the planning of this type of lesson, choosing the moderator and speakers and in general guiding the lesson toward a satisfactory conclusion. You will need to make sure that the students stay on the subject under discussion, that many students take part, that learning goes forward, and that mistakes are corrected.

After your students have read pp. 171-174 about the famous cities, the tourist trade, and the contributions made by the Mediterranean lands to civilization, many members of your class will be prepared for a panel program. A discussion of the "Checking Up" questions, "Questions to Think About," "Words to Understand," and "We and They" sections, all on p. 174, can be further preparation for the panel lesson.

The first step in planning a panel lesson is to choose a central question or problem for discussion. Then, to select topics relating to the central problem to be assigned to the various panel members. The following problem and related topics based on pp. 171-174 may give you ideas for planning a panel program:

Problem : Has our culture been enriched by the people of the Mediterranean area?

Topics:
(1) Fine art has been created.

(2) Outstanding music has been written.

(3) New forms of law and justice were conceived.

(4) Democracy was born.

(5) Great literature originated.

(6) Classical architectural design developed.

Next, you will need to choose the members of the panel. You may want to select students who have shown a special interest in one of the topics. Usually, a panel consisting of six students works well in the classroom.

Once you have chosen the panelists, you may want to have some special meetings with them. These meetings can be held during the class period while the rest of the class is engaged in another activity, or you may find it more satisfactory to hold them after school. At an early session, have the panel members select the topics they wish to discuss and determine what additional research has to be done. The oral reports can be prepared at home. The panelists can present and discuss their completed reports at another meeting, prior to the class presentation. The student moderator should be present at the final meeting to gather information to use in his introduction.

To make sure that everyone will take part in the program, it may be advisable to have the panel prepare some questions relating to their reports. You may want to prepare some questions too. Write the questions on separate pieces of paper to be distributed among the class. Questions such as these may be used to stimulate discussion:

(1) Where are some buildings in our community that might have been copied from Greek architecture?
(2) Why is Jerusalem called the "Holy City"?
(3) Why do many tourists want to visit Rome?
(4) What are some other tourist attractions in Italy?
(5) How did the idea of democracy come to America from ancient Greece?

On the day of the panel program, you can distribute the prepared questions during the discussion. You may wish to give the questions to students who usually do not enter into a discussion freely. In this way, you can make sure that everyone in the class takes an active part in the lesson.

You can direct the lesson, when necessary, by limiting the discussion to the chosen topics and by helping the moderator if he needs help. However, at other times, you can become a listening member of the class.

Discussion Skills. In an activity such as the panel program, there are many worthwhile objectives. One of these is the development of valuable discussion skills and attitudes. If you have not already done so, you might want to spend some time before the panel lesson working with your class on discussion skills.

In all discussions, try to make your students feel free to talk. They should know that there will be no embarrassment connected with any of their contributions. When a student is speaking, be sure that he sticks to the subject under discussion. You can sometimes do this by requiring the speaker to relate his statement or question to some point previously expressed by other members of the class. This relating of ideas prevents irrelevant statements and encourages your students to listen attentively to what other students have to say. Furthermore, it may prevent a student from being too talkative and monopolizing the time.

Your class discussion may proceed more smoothly if your students know how to exchange ideas politely. To help them with this skill, you may want to display on the board a list of phrases that may be used in conversation. These phrases need not be followed verbatim, but they may help your students in their early attempts at discussion.

"I don't agree with John because ...."
"To make what Anne said a little clearer, I would like to say ...."
"Howard, referring to what you just said, I would like to ask the following question, ..."
"I agree with what has just been said but I would like to add some more information ...."
"I would like to question what Judy just said about .... as I have read that ...."
"Keeping in mind what Paul said about the .... and the question that Phyllis raised about ...., I would like to include another point about ...."

Discussions skills can be improved and developed throughout the year if discussions are held frequently and if enough attention is given to a few basic rules of procedure. For example:

(1) Wait until called upon before speaking, so as not to interrupt someone else.
(2) Speak in a loud, clear voice so that everyone can hear.
(3) Organize your thoughts so that what you say makes sense.
(4) Give the same attention to other students that you expect them to give to you.
(5) Wait to hear everything that a speaker wants to say before forming conclusions.

These rules apply to formal panel discussions as well as to informal class discussions. Eventually, your students may want to add some rules of their own.

SUGGESTED ANSWERS FOR CHAPTER 8.

"Checking Up", p. 167

1. The Mediterranean farmer terraces the steep slopes in order to get fairly level land for farming. The earth is cut away on part of the slope and moved to another place. In each place, farmers have leveled the soil, making two fields where there were none before.

2. The lowest zone on the mountain side is the citrus fruit zone. The lower levels have the longest season without frost. This long growing season is necessary for citrus fruits. Many times water is also available for irrigation. Sometimes, the farmers plant wheat and vegetables between the trees. The olive trees in the next zone do not require much water or very rich soil. Often, wheat, vegetables, or grape vines are planted between the rows of olive trees. The grape vine zone or vineyards occupy the third zone. The vines can grow on very rocky and dry soil because they have extremely long roots. The fourth zone is the chestnut zone. Here, the chestnut trees and other nut trees, as well as the cork oak, are grown. Finally, on the highest parts of the mountains, where the climate is too harsh for cultivated crops, there are pastures and forests.

3. The sirocco is a hot, dry wind blowing from the Sahara Desert. It sometimes blows across the Mediterranean area in the spring. If it blows continually for a day or two, the blossoms and leaves of the trees wilt, ruining the crop. The hot, dry, dusty atmosphere makes the people quarrelsome.

"Checking Up", p. 171

1. Most of the towns and villages in the Mediterranean area are quite old. When they were first built, the hilltops afforded the best protection from pirates and robbers. The people also discovered that it was more healthful to live on the hilltops because the lowlands had malaria-carrying mosquitoes.

2. Because snow seldom falls in sunny semitropical lands, the roofs of houses can be flat since they do not have to support the weight of heavy snows. There is little need for central heating, or indoor fires because of the warm temperatures, and so there are no chimneys. The wooden shutters are opened in the winter because frequently it is warmer outside in the sunshine than it is inside the house. In the summer, the shutters are closed to keep out the heat and glare of the sun. The mild climate allows baking and cooking to be carried on outdoors. For the same reason, school sessions can be held in the open too.

3. Everyone needs a certain amount of fat in the diet. These Mediterranean people have a difficult time getting and keeping animal fat fresh. Olive oil serves as a substitute for animal fat.

"Checking Up", p. 174

1. The cities of the Mediterranean lands are attractive to tourists because they are old and contain art museums, beautiful buildings, famous theaters, opera houses, concert halls, and fine restaurants. The visitors may feel that in these ancient cities they are standing face to face with the beginnings of our civilization.

2. The people of early Athens have contributed many of the basic ideas of democracy, architecture, art, literature, science, and law. From the Romans, we inherited ideas about our systems of laws and courts of justice as well as ideas for constructing bridges, aqueducts, and highways. The Romans also contributed to our ideas of art, literature, and architecture.

3. The Holy City is a suitable name for Jerusalem because Jesus Christ lived, worked, and died there, and because the city contains religious sites sacred to the Jews and Moslems. In Jerusalem Christianity had its beginning. Istanbul is important as a seaport because it is located on the Bosporus, an important water route between the Mediterranean Sea and the Black Sea. Istanbul is a great connecting link between two continents, Europe and Asia.

"Questions to Think About," p. 174

1. Farming people of the sunny semitropical lands around the Mediterranean Sea should actually be called "gardeners" because they cultivate small plots of ground in an intensive manner. Most of their crops are grown for their own use.

2. The chestnuts ripen and must be picked in the fall. Everyone, including the school children, is needed to help with the harvest. For this reason, many of the schools in the mountain areas have vacations in the autumn rather than in the summer.

3. Terraced slopes are related to the mountainous land and to the lack of level land. Terracing creates usable farmland on steep slopes. Irrigation is needed during the long, hot, dry summers because insufficient rain falls to provide the necessary moisture for most crops. The location of the villages and the cities is related to the mountainous land, to the danger of malaria, and to the poorly drained coastal plains and valleys. Olive trees will grow during the long, dry summers and in the thin, stony soil. The oil is necessary for the diet. The tourist industry is related to the mild winters, abundance of sunshine, beautiful mountain scenery, and ocean landscapes. The importance of grapes and the production of wine is related to the dry summers and the poor water supply. Wine is frequently used as a substitute for drinking water.

4. The Mediterranean farmer manages to grow two crops in the same place at the same time by interplanting, the planting of one crop between the rows of another crop. He may also plant wheat under the olive trees or raise vegetables between the grapevines.

"We and They", p. 174

1-5. These questions help your students to think about life in the Mediterranean lands of Europe from a new viewpoint. The questions encourage your students to discuss the similarities and differences between their community and the Mediterranean area. It may be helpful if you point out some of the reasons why your students' community, ways of life, and methods of doing things are sometimes different from those found in the sunny semitropical lands around the Mediterranean Sea.

EVALUATION EXERCISES

To Check on Your Students' Understanding Of Factual Information

Directions: Answer each question and put the first letter of your answer in the blank space beside the question. All the filled-in letters, read downward, spell an important crop raised in the sunny semitropical lands around the Mediterranean Sea.

O 1. ✓ What product is used in Mediterranean lands as a substitute for animal fat? (olive oil)
L 2. ✓ What is one of the citrus fruits raised in Mediterranean lands? (lemon)
I 3. What important new country of Asia has sunny semitropical climate? (Israel)
V 4. ✓ What do we call a field of grape vines? (vineyard)
E 5. What country along the Mediterranean Sea does not have sunny semitropical climate? (Egypt)
S 6. ✓ What large island is located south of Italy? (Sicily)

To Measure Your Students' Understanding of Zonal Farming

Directions: Arrange the agricultural zones in correct order, descending from the top of the mountain to the bottom.

		Answer	
1.	Olive Tree Zone	Forest and Pasture Zone	(5)
2.	Grapevine Zone	Chestnut Tree Zone	(4)
3.	Citrus Fruit Zone	Grapevine Zone	(2)
4.	Chestnut Tree Zone	Olive Tree Zone	(1)
5.	Forest and Pasture Zone	Citrus Fruit Zone	(3)

To Measure Your Students' Understanding of the Contribution This Area Has Made To Our Culture

Directions: Match the statement in Column I with the correct answers in Column II and Column III.

Three on a Match!

	Column I	Column II	Column III
(C-E) 1.	Origin of democracy as a form of government	A. Jerusalem	a. The Pope
(E-a) 2.	Center of the Catholic Church	B. Romans	b. Aqueduct
(A-d) 3.	The Holy City	C. Greece	c. Bosporus
(B-b) 4.	Origin of some building ideas	D. Istanbul	d. Church
(D-c) 5.	City where Asia and Europe meet	E. Rome	e. Congress

To Determine Your Students' Understanding of Adaptation to Natural Environment

Directions: Choose the answer that best completes each statement. For some statements, more than one answer may be chosen.

1. Many of the towns and cities are built on hills because

x a. they are free of disease-carrying mosquitoes.
b. they have a beautiful view.
c. there is no other place to build them.
x d. the hills afforded protection from pirates and robbers.

2. The shutters of the house are kept open in the winter because

a. there are no flies to come in.
b. the house gets too hot.
x c. it is warmer outside than inside.
d. the air is fresher in winter.

3. The lower parts of mountains are used for growing citrus fruits because

x a. they have less frost.
x b. they can be irrigated.
x c. the soil is better.
d. there is more room there.

4. The domestic animals include sheep, goats, donkeys, and mules because

x a. they do not need much water.
b. they thrive in this climate.
c. they are strong animals.
x d. they can eat the dried grass.

5. There are many vineyards because

a. the people like grapes.
x b. wine is a water substitute.
x c. the vines have long roots to reach the moisture.
x d. the vines will grow in poor, stony soil.

6. The farmers use interplanting because

a. the crops grow better
b. it improves the soil.
x c. two crops can grow in the same soil at the same time.
d. they like to work hard.

STUDENT READING LIST FOR CHAPTER 8

NON-FICTION

**Aitchison, A., Europe the Great Trader, Bobbs. Vacation land in France, oranges and onions in Spain, lands of sunshine and drought make up part of Europe's storehouse.

**Ekrem, S., Turkey Old and New, Scribner, 1947. Turkey is depicted as a land of contrasts where the old mixes with the new and where East meets West.

**Gianakoulis, T., The Land and People of Greece, Lippincott, 1952. The first three chapters give an insight into life in Greece today where poor land influences the activities of the people.

**Hoffman, G., Land and People of Israel, Lippincott, 1950. A good description of the land, people, and history in this old but new country.

**Loder, D., The Land and People of Spain, Lippincott, 1954. While the majority of this book deals with history, the first part gives a general picture of the land of Spain.

**Reid, A., Young Traveler in France, Dutton, 1953. The young traveler journeys through the French countryside and visits the sunny southern coast.

**Rothery, A., Italian Roundabout, Dodd, 1950. Italy presents a wide and varied picture to the visitor and sightseer.

FICTION

**Angelo, V., Marble Fountain, Viking, 1951. The finding of a statue by two Italian orphan boys proves to be a turning point in their lives.

**Angelo, V., Nino, Viking, 1942. Nino grows up in Italy and discovers he has a talent for art. He longs to see his father who lives in America.

**Fenton, E., Aleko's Island, Doubleday, 1948. A treasure is discovered which everyone wants, but Aleko is the only one who knows where it can be found.

**Rugh, B., Crystal Mountain, Houghton, 1955. Gray-headed ladies in pine trees and windows that look out on nothing confront two American boys and an English girl when they explore the hills of Lebanon.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 8

The Azure Coast, 1951 (mp, b&w, sound, 18 min, #29). Covers the south of France and shows the flowers and perfume industries.

Bread and Wine, 1947 (mp, b&w, sound, 16 min, #41). Deals with Italian agriculture. Cultivation of crops, making of bread, and the routine life of the farmer are included.

Building a Nation (Israel), 1950 (mp, b&w, sound, 20 min, #65). Surveys the changes in culture in Israel and shows how the Arabs and Jews live.

A Family of Greece, 1953 (fs, b&w, 46 fr, #69). Life of a farm family about 20 miles north of Athens where wheat, olives, sheep, and goats provide income.

Greece, 1952 (mp, color, b&w, sound, 10 min, #39). Depicts the life and work of the people.

Greek Children, 1951 (mp, b&w, sound, 16 min, #23). Daily activities of a boy and girl of Galaxidi, a fishing village in southern Greece.

Historical Geography of Southern Italy, 1954 (fs, color, 41 fr, #15). Shows close relationships between human activity and the physical setting. Soil erosion, forest burning, excessive grazing, isolation, and political unrest have contributed to present-day problems.

I Live in Greece, 1955 (fs, color, 40 fr, #48). A boy living in Crete helps his family fish and farm.

Italian Peninsula, 1950 (mp, b&w, sound, 10 min, #20). Shows how the differences in geographic factors have influenced the lives and occupations of the Italian people.

Italy, 1951, (fs, b&w, 29fr, #69). A photographic story of a farm family near Florence into which are woven the basic themes common to daily life of mankind.

Italy -- Peninsula of Contrasts, 1952 (mp, color, sound, 17 min, #23). Shows progress in transportation and farming methods and explains how the physical geography influences the lives of the inhabitants.

Italy Today, 1955 (fs, b&w, 30 fr, #66). Italy's geographic, political, economic, and cultural position in the world today.

On Mediterranean Shores (Southern Greece), 1949, (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Shows how a large part of Greece's food supply is produced in poor soil. The three-level system of agriculture is shown and discussed.

Portugal, 1952 (fs, color, 56 fr, #23). Includes a description of methods of cultivating wheat, grapes, olives, and figs. Shows workers stripping the cork oak.

Spain: The Land and People, 1949 (mp, b&w, sound, 10 min, #20). Encompasses the country and the life of its people.

Turkey -- Let's Talk Turkey, 1940 (mp, b&w, sound, 15 min, #13). Old and modern markets, the daily life, street scenes, and mosques are viewed in Istanbul and Bagdad.

CHAPTER 9: CALIFORNIA, THE GOLDEN LAND

YOUR OWN LOOK AHEAD INTO CHAPTER 9

Just as people in the old world settled around the Mediterranean Sea to take advantage of the favorable natural environment, so people in the United States have migrated to California. The history of this region is an interesting one. In 1542, Cabrillo explored the California Coast in search of a sea passage to the Atlantic, claiming the coastlands for Spain. The region remained under Spanish control and then under Mexican control until after the Mexican War. During this war, the California Republic with its Big Bear flag was born.

The discovery of gold shortly after the Mexican War brought thousands of people across the United States in 1849 in search of riches. The population grew so rapidly that in 1850, California was granted full status as a state of the United States. The population increased steadily, but the second big "rush" to California followed World War II. New industries were started, old industries expanded, housing developments sprang up, and cities mushroomed. The people came in such numbers that community services and water supply could not keep pace with the population growth. Today, California is trying to cope with many problems caused by its growing population.

In Chapter 9, the reading material is divided into a number of sections which will help your students to organize their thinking.

1. "Let's Look at Maps", pp. 176-177.

2. "A Rich Land and a Big Problem", pp. 178-181, gives an over-all picture of the state of California, examines minor variations in the sunny semitropical climate, and discusses California's big problem, the scarcity of necessary water.

3. "In the Great Valley of California,"pp. 181-184, describes a typical farm in the rich valley section of the state. The Central Valley Water Project is examined as a means to help solve the water problem in the Great Valley.

4. "Living in Southern California,"pp. 185-187, points out the advantages that encourages outdoor living and that have drawn the citrus fruit industry and other industries into the Los Angeles area.

5. "Great Cities of California,"pp. 187-189, describes San Francisco and Los Angeles and tells how Californians solved big problems and succeeded in building two of the leading cities of the state and of the nation.

. . . .

FOR YOUR OWN READING

To find out more about the sunny semitropical lands of North America, you may want to refer to one of the following books.

C. Langdon White and E. J. Foscue, Regional Geography of Anglo-America, Ch. 14, "The Subtropical Pacific Coast".

J. Russel Smith and E. O. Phillips, North America, Ch. 31, "The Los Angeles Basin", and Ch. 33,"Central California."

. . . .

MAJOR QUESTIONS

During the study of this chapter on California, you may want to stress the following Major Questions which are directed toward accomplishing some of the Primary Objectives of teaching geography.

Primary Objective:		Major Question #1
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.	→	How have the people of California taken advantage of their natural environment?

Natural Environment	Practice
Climate	Farming: Farmers are able to grow 180 different crops. Housing: There is much outside living in southern California. Many of the houses are low, one-storied structures because the ground is not damp. Clothing: Many"play clothes"are worn because of the relaxed atmosphere and outdoor living. Industry: Aircraft industry makes use of the year-round flying weather. The movie industry originally took advantage of the sunshine and varied scenery. The citrus and dried-fruit industry. Tourist industry. Sports clothing industry.
Alluvial Soils	Farming: Farmers make use of the rich, well-drained edges of the numerous alluvial fans.

(Chart continued on next page)

Mountains	Farming: The Central Valley is protected from the cool ocean breezes in summer and from the warm breezes in the winter. The mountains also keep out the very cold air masses from the interior of the continent. Crops are grown which suit the soil and climate. The Los Angeles area is protected by mountains and has a climate and soils suitable for growing citrus fruit. Water Supply: A snow survey is held in the mountains every winter to determine how much snow has fallen and to meausre the water content of snow so that available water can be predicted for the coming year. Many of the cities and towns have reservoirs in the mountains from which they draw their water supply. Clothing: In the San Francisco area, the mountains afford no protection from the Pacific Ocean, but they do keep its influence from spreading into the Central Valley. Fog and cool breezes keep San Francisco cool in the summer and warm in the winter. Winter clothing is often needed on summer evenings. Industry: Tourists make use of the mountains for winter and summer activities.
Minerals	Mining: Oil and gas fields are located in the Los Angeles area and in the Central Valley. Gold and other minerals are important.
Ocean and Harbors	Transportation: San Francisco has a large natural harbor. The Bay Bridge and the Golden Gate Bridge cross the harbor and connect San Francisco with transportation lines from other parts of the United States. Products and raw materials are imported from the Far East.

Primary Objective:

To acquaint the students with their own country so that they will have a better knowledge and understanding of our position in the world today. →

Major Question #2

In what ways are the people of California attempting to solve their problems?

Great Valley

Problem	Solution
The Sacramento River frequently floods in the spring. Then, in late summer, many of its tributaries dry up and the depth of the river lowers. Navigation is halted, and salt water backs up on the delta, destroying crops. The San Joaquin River irrigates much fine farmland, but there has never been enough water.	In 1931, the people formed the Central Valley Water Project. Dams are being built on both rivers for flood prevention and to store water. A series of canals will carry the water to the areas where it is needed in the summer time. This project will also provide electric power for the valley. The project is very expensive, and the government has been helping the people of California to finance the job. The work is still going on today.

Los Angeles

Problem	Solution
In 1908, Los Angeles and other towns and cities in southern California outgrew their water supply. The continually growing population and industry cause a steady drain on all available water.	An aqueduct 238 miles long connects the city to Owens Lake in the Sierra Nevada Mountains. An additional pipeline 335 miles long brings water from Lake Mead behind Hoover Dam. Still, Los Angeles needs more water.

The two Major Questions suggested for this chapter are closely related. Although Californians have developed the natural advantages of their environment to the fullest, the huge problem of securing enough water for the growing population, expanding industries, and increased farming still requires constant attention.

SUGGESTIONS FOR TEACHING

In teaching this chapter, you may wish to use some of the ideas suggested for earlier chapters. Some new ones are included in the following pages.

Arousing Interest in the Chapter. California presents many fascinating aspects which can be used to secure your students' interest. You may want to try one of the following suggestions.

1. Exhibit an orange, a bunch of grapes, a jar of olives, a travel poster advertising California, a picture of a movie star, a picture of a ranch house, and any other object which may be typical of California. Ask your students, "Which state in the United States has or grows all of these things?" Some of your students may think of Florida when they see the orange, but when the olives and the picture of a movie star are presented, these students will probably change their answer to California.

You can explain to your class that California has the same climate as the lands around the Mediterranean Sea. You might then go through your exhibit again and have the students name the objects that might be found in the Mediterranean countries. This will give you an opportunity to review briefly the previous chapter, and will give your students hints about some of the things they might expect to find in California.

2. Perhaps you or members of your class have visited or lived in California. Your introduction might be one of oral teaching as you tell your students about your personal experiences in the sunny semitropics. Photographs or colored slides are effective aids in this kind of lesson. You may also wish to invite a guest to tell your students about California. Encourage your students to ask questions and have them make a list of things they may want to investigate more thoroughly.

3. Films, filmstrips, and colored slides showing the scenery of California or other aspects of California life might be used to create interest. You may want to refer to the list of"Selected Audio-Visual Aids for Chapter 9"on p.21 of this booklet.

Getting Started (pp. 175-176). Your students are introduced to the"golden land"of California through the windows of their imaginary jet transport. They get a quick airplane view of the state and see many of the things they will investigate more closely in the map study and reading.

Let's Look at Maps (pp. 176-177). In this map study your students are given an opportunity to use many of their previously learned map skills and to acquire some new skills. The following chart shows the new and reviewed map skills.

Map Skills

Skills	Review	New
Direction	N,S,E,W, Latitude	
Distance	Scale--recognition of differences	
Location	Latitude	
Symbols	Mountains, rivers, (and their courses), bay, ocean, cities	Arrows to indicate ocean current
Legend	Hatching to indicate sunny semi-tropical climate Shading to indicate elevation Shading to indicate precipitation and population (relative differences)	

(Chart Cont'd)

Skills	Review	New
Comparison & Inference	Latitude of two areas compared Elevation of two areas compared Precipitation of two areas compared Population of two areas compared Inference about cities from location Inference about importance of rivers	Inference about effect of ocean current on climate Inference about effect of mountain barrier on climate Inference about natural harbors

Suggested Answers for Map Study

1. The sunny semitropical region of California extends from about 32° N. latitude to 42° N. latitude. The area around the Mediterranean Sea ranged from about 32° N. latitude to 45° N. latitude.

2. By following the directions, your students can see the two important climatic divisions in the state.

3. The Sierra Nevada range forms the eastern boundary and the Coast Ranges form the western barrier of the Great Valley. The Sierra Nevada Mountains look the highest.

4. San Francisco Bay is almost completely surrounded by land. The Bay region looks like a good place to locate cities because the Bay acts as a natural gateway from the ocean to the interior and to the Great Valley.

5. The streams that flow down the western slopes of the Sierra Nevada Mountains are valuable to the people in the Great Valley because they bring water which is necessary for irrigation in the summer.

6. By following the directions, your students can find the mountain barriers that shelter the valleys of coastal southern California.

7. The breezes blowing onshore over the California Current keep the coastal regions cool in the summer. These cool breezes probably do not enter the Great Valley because they are blocked by the Coast Ranges.

8. The rainfall is heaviest in the northern part of the state and along the western edge of the Sierra Nevada mountains. The coastal areas get more rainfall than the Great Valley.

9. The areas around San Francisco Bay and Los Angeles are the most densely populated. ✓

Reading about California (pp. 178-189). Directed study assignments can be used to help your class read about the state of California. The "Checking Up" questions on pp. 181, 184, 187, 189 make ideal guide questions for directed study lessons. You will probably want to gauge your daily reading assignments according to the abilities of your students. Assignments for *reluctant students should be short. **Average students should be able to handle longer readings. Your ***advanced students should be able to complete long passages and undertake supplementary reading, to be shared later with the rest of the class.

To summarize the chapter and to organize thinking, you may want to use the Major Questions. You may also want to emphasize the new geographic terms and words in Chapter 9. The list of "Words to Understand" on p. 190 contains many of these important words. The "Questions to Think About" on p. 190 focus your students' attention on the outstanding geographic relatinnships in California. "We and They" on the same page helps your class compare California with their own community.

Developing Critical Thinking. The ability to think critically is a vital skill for everyone, students and adults alike. Too often the public is taken in by what sounds good or looks good at first glance. Without critical thinking, none of us can truly evaluate what we read, what we see, and what we hear.

Your geography class is an excellent place to stress this important skill. And it must be stressed continually. The ability to think critically cannot be taught in one classroom session. It must be practiced and used. Criticisms should be intelligent and based on the best known facts. To begin to develop this skill, you may want to try an exercise based on the following advertisement.

HAVE YOU HEARD THE NEWS FROM
SOUTHERN CALIFORNIA?

Recent years have brought some exciting new things to America's 4-Season Vacationland . . .

1. NEW SEASHORE FUN . . . new ocean highways, new beaches, new yacht harbors. Improved accommodations near roaring surf; miles of sand.
2. NEW DESERT WONDERS . . . improved highways to strange cactus forests, painted canyons; new, luxurious resorts, swimming pools.
3. NEW MILE-HIGH DRIVES, new mountain resorts -- added to brilliant lakes, hungry trout, and the old, restful quiet of pine forests.
4. NEW FIESTAS, restored missions, new horse racing (almost year-round), lush orange groves, flowers of subtropical valleys.
5. NEW FUN IN MOVIELAND . . . seven television stations add their entertainment to premieres, celebrities, night spots of the movie and radio capital.

WHICH SEASON IS BEST? For a visit to Los Angeles County and all Southern California, choose any season, for our exclusive, dry subtropical climate means sunny outdoor comfort year-round.

COME OUT THIS YEAR! To help plan your vacation in Los Angeles County and all Southern California, send coupon for free color folder. Mail it today!

All-Year Club of Southern California, Ltd. This advertisement sponsored by the Los Angeles County Board of Supervisors for citizens of Beverly Hills, Glendale, Hollywood, Long Beach, Los Angeles, Pasadena, Pomona, Santa Monica and 182 other communities. Copr., 1950, by All-Year Club of Southern California, Ltd. -- a non-profit community organization serving vacationists.

* Advise anyone not to move here now unless assured in advance of employment.

(See next page for suggestions on
the use of this advertisement)

This advertisement was clipped from a national magazine. It publicizes southern California as a vacationland. You can show it to your class. By using an opaque projector, you can reproduce this advertisement on a screen so that everyone in your class can see it well. You might then proceed with a critical analysis. The following questions will guide your students' thinking.

"What part of California is publicized in this advertisement?" (Southern California). "What five attractions are stressed?" (New seashore fun, new desert wonders, new mile-high drives, new fiestas, new fun in movieland). Next, you might have a student read orally the smaller print beside each attraction. You can then ask, "What have we studied about California that can verify any of these statements?" This question requires your students to re-examine the information which they have just studied or to do additional research. Have students check and verify the statements by referring to their textbook and other reference books.

Your students have already learned from their textbook that southern California has many good beaches and that the people do much outdoor living (p. 185). To verify the desert wonders, your students must recall information from Unit Three, where they learned that parts of southern California were in the dry lands region (p. 141).

Your students will also recall that the high Sierra Nevada mountains border most of the eastern side of California. Since the elevation of these mountains is well over 5,000 feet, mile-high drives are possible (p. 177 and p. 418). Your students will also remember that in the Los Angeles area of southern California, there are citrus fruit farms and that Hollywood is the movie capital (p. 185).

To make your students examine the advertisement more critically, you might ask them if they know anything about southern California that was not included in the ad. "Are there any drawbacks in southern California that were not mentioned?" "What about the overcrowding in the Los Angeles area?" (p. 189). Some student may see that there is a note at the bottom of the ad that says, "Advise anyone not to move here now unless assured in advance of employment". The class may agree that this refers to the overcrowded conditions.

Call your students' attention to the statement that all seasons are fine for visiting southern California. "Is this true?" (pp. 178-179, "The Southern Coastal Climate". The winters have more rainfall, but this is in the form of showers, and the sun comes out soon afterwards.)

After you have finished asking questions, perhaps your students can think of additional critical questions to ask and answer. Finally, they could have the opportunity to state whether they consider this a fairly presented piece of advertising or whether they think it is filled with half truths and misleading facts. They will probably come to the conclusion that this is an honest advertisement about southern California.

After your students have had practice in analyzing some accurate material, you might have them examine an advertisement that is misleading. Such advertisements can be fictitious. You may want to write them yourself so that you can stress certain points. One like this might help.

OWN YOUR OWN HOME!

REAL ESTATE -- CALIFORNIA'S GREAT VALLEY

35 miles east of Fresno. Price $100 per acre.

"Assuming you are interested in purchasing and that you have $100 to spend, how many of you would buy the property advertised, sight unseen?" After your students have answered, you will want to study the problem more carefully.

"Where is Fresno?" "Where would 35 miles east of Fresno be?" (p. 177). "What do you already know about the Great Valley? (p. 179) "Would you like it?" "How about the water situation?" (pp. 183-184). "Will water be available?" "Is the property near a highway so that travel is easy?" These questions and many more can be asked.

Property 35 miles east of Fresno may be all right, but more investigation would be needed. First of all, the location would put it somewhere in the foothills of the Sierra Nevada mountains. Secondly, it might be on the upper part of an alluvial fan where the soil is stony (p. 181-182). Thirdly, water has always been a problem in the Great Valley, and it would probably be a problem here. Finally, the inexpensive price indicates that perhaps this land is not too desirable. Perhaps your class will conclude that a buyer should investigate this property further before buying it.

You might ask your class to collect advertisements about places which they study in geography class. These can be brought to class and analyzed in order to determine whether they are accurate, misleading or need more investigation. A bulletin board display might be arranged to illustrate how many times the gullible public is fooled because they do not take the time to analyze what they read.

SUGGESTED ANSWERS FOR CHAPTER 9

"Checking Up", p. 181

1. The farmers in California have several advantages over farmers in other sunny semitropical lands. California has more land fit for cultivation, more fertile soils, and more water for irrigation. Besides, the California farmer has the latest labor-saving machinery available. In addition, trains, ships, and trucks are available to take the crops to market. Finally, the people of the United States create a huge, wealthy market.

2. The Great Valley has hotter summers and cooler winters than the southern coastal areas because it is surrounded by mountains, the Coast Ranges on the west and the Sierra Nevada range on the east. The valley heats up like a furnace in the summer. Because of the mountain barriers, the hot air cannot escape, and no ocean breeze can reach the valley to cool it. The winters, although cooler than those in the coastal regions, are not cold, because the Sierra Nevada range protects the valley against the cold winter air from the interior of the United States.

3. California has a big water shortage problem because it has a rapidly growing population, because factories which use much water are being built, and because much water is needed to irrigate all the land that is available for cultivation.

"Checking Up", p. 184

1. An alluvial fan is built up when swift-flowing mountain streams carrying all kinds of material from heavy rocks to fine soil, break out into a lowland. The highest part of an alluvial fan is made up of large rocks and boulders and has little agricultural value. After the rocks, gravel is dropped, then sand, and finally silt and clay. The outer portions of the alluvial fan make fine farming land because the soil is deep, well-drained, fertile, and easy to irrigate.

2. The climate in the Great Valley favors grape growing because it has the warm summers and long growing season needed by grapes. In order to store up sugar and ripen, the grapes need sunlight, dry air, and high temperatures. California offers all of these. The only danger the grape owner must face is that of the temperatures becoming too hot and the winds scorching the leaves and grapes on the vine.

3. The Central Valley Water Project will help solve the water problem of the Great Valley because dams have been built, making great reservoirs that store the melting snow. This water then can be used for irrigation during the dry season. It will keep the salt water from backing up on the deltas of the Sacramento and the San Joaquin Rivers during periods of low water. It will generate new supplies of electric power. It will also allow more land to be brought under cultivation in the San Joaquin Valley.

"Checking Up", p. 187

1. Four industries favored by the climate of southern California are: the citrus fruit industry, the movie industry, the aircraft industry, and the tourist industry.

2. The citrus grower farms every part of his land very carefully. He cultivates his fields right down to the edge of the highway. He may often plant nut trees along his fences and roads. Many times he plants citrus groves on the lower slopes of the mountains even though he is taking a chance with frost. Wherever the land can be irrigated, there are citrus groves.

3. The orange or lemon grower of southern California must face the dangers of frost, drought, insects, and soil erosion.

"Checking Up", p. 189

1. San Francisco has one of the finest natural harbors in the world. The bay is large, deep, and well-protected. Two huge bridges, the Bay Bridge and the Golden Gate Bridge, link San Francisco with land traffic to the east and north. Los Angeles originally had no harbor for ocean-going ships. The citizens built a harbor in San Pedro Bay by erecting breakwaters and dredging deep channels. Today, Los Angeles has become a first-class port.

2. Los Angeles has grown very rapidly because it has a favorable climate which attracts people and industries. The growing population has also given rise to more manufacturing. The soil nearby is good for raising citrus fruits and other cash crops. The city faced two big problems: the lack of a harbor, and the shortage of water. The latter was partially solved by building a large aqueduct from Owens Lake in the Sierras and a large pipeline from Lake Mead. However, Los Angeles still faces a water problem today.

3. The advantages of a favorable climate and the presence of metal ores and petroleum have brought many industries to California. In addition, many new industries were started to answer the needs of the growing population. It is expensive to transport manufactured goods two to three thousand miles to California. It is much easier to build manufacturing plants there. The West Coast's location attracts raw materials from the Orient and the East Indies. Industry was expanded greatly during World War II. The expansion is still going on today.

"Questions to Think About", p. 190

1. Many people have moved to California to take advantage of the mild climate or the expanding business opportunities there.

2. The climate of the Bay region differs from the rest of California because San Francisco is not protected by the Coast Ranges. In the summer, the cool breezes from the Pacific Ocean blow over the area, but they are blocked from entering the Great Valley by mountains. Heavy fog rolls in over the Bay region during much of the year and makes a summer day cool. However, this same ocean breeze keeps the San Francisco area warmer than the Great Valley in winter.

3. The snow survey is directly related to weather and climate in California. The purpose of the survey is to measure the snowfall in order to determine how much water will be supplied to the rivers and streams when the snow melts. The surveyors measure the depth and extent of the snowfields as well as the water content of the snow. The job is dangerous because the men must work in deep snow on rugged mountains while temperatures are extremely low. The farmers use the information from the snow survey to determine whether the water for the coming year will be abundant or scarce. In this way, the farmers can plan ahead and know whether to plant many or few crops.

4. Headlines such as these mean that many people in the citrus fruit industry are busy with smudge pots trying to save the fruit crop by heating the groves. For many growers, frost would mean the loss of a year's income. Merchants and other people would be affected also.

5. Late in the winter, the grape growers of California prune their vines and plow the ground between the rows. During the spring, the growers continue to cultivate the soil with their tractors. When the vines grow larger, however, cultivating by tractor would injure the plants. The growers must then cultivate by hand. During late spring and early summer, the grape farmers flood their vineyards at regular intervals. Finally, in the late summer or early fall, the grapes are picked and cured. There are many differences between growing grapes in the Mediterranean area and in California. In the Mediterranean area, the grapevines are grown on terraces. In California, the land used for vineyards is level. Irrigation is used extensively in California, but in Europe the water is needed for more valuable crops. The vines secure moisture through their extremely long roots. Finally, most of the grapes in the Mediterranean are made into wine. In California, grapes are sold fresh, or dried and sold as raisins.

"We and They," p. 190

These questions give your students an opportunity to compare the environment of their community with that of the sunny semitropics.

EVALUATION EXERCISES

To Check on Your Students' Understanding of Factual Information

Directions: Each exercise below contains two statements. You can spell out an important California product by choosing the correct statement in each exercise and following its instructions.

C. 1. If the Coast Ranges are adjacent to the Pacific Ocean, write a C before #1.
If the Sierra Nevada Mountains are adjacent to the Pacific Ocean, write an R before #1.

I. 2. If the Los Angeles River flows through the Great Valley, write an A before #2.
If the San Joaquin River flows through the Great Valley, write an I before #2.

T. 3. If Los Angeles gets water from Lake Mead, write a T before #3.
If Los Angeles is in northern California, write an S before #3.

R. 4. If the snow survey measures the snow for skiing, write an I before before #4.
If the snow survey foretells the available water, write an R before #4.

U. 5. If Los Angeles has a good natural harbor, write an N before #5.
If San Francisco has a good natural harbor, write a U before #5.

S. 6. If a cool current flows past California, write an S before #6.
If a warm current flows past California, write a P before #6.

To See How People Have Taken Advantage of Their Natural Environment

Directions: California is composed of a number of regions: the Great Valley, Los Angeles area, San Francisco area, and mountains. In the following list, tell in which region of California each of the things listed can be found.

1. Sacramento River (Great Valley)
2. Orange Groves (Los Angeles area)
3. Movie Industry (Los Angeles area)
4. Vineyards (Great Valley)
5. Golden Gate (San Francisco area)
6. Ski resorts (Mountains)
7. Fur coats in August (San Francisco)
8. Snow Survey (Mountains)
9. San Joaquin River (Great Valley)
10. Airplane factory (Los Angeles)

To Measure Your Students' Understanding about Physical Aspects of California

Directions: Supply the correct answer to fill the blank in each of the following sentences.

1. Rich soil which has been washed down the mountains and deposited in the valleys is called (an alluvial fan).

2. A (vineyard) is really a field of grape vines.

3. The (Coast) Ranges and the (Sierra Nevada) mountains shelter the Great Valley.

4. The Central Valley Water Project will control floods on the (Sacramento) and the (San Joaquin) Rivers.

5. Water is brought from Owens Lake to Los Angeles by (an aqueduct).

To See Whether Your Students Appreciate the Advantages Enjoyed by California

Directions: The sunny semitropical lands have many advantages. California has even more than the Mediterranean area. In the following list of advantages, place an x beside each advantage that is found in California but is lacking in the Mediterranean area.

Rapid transportation x
Terraces
Much level land x
Plenty of rain
Rich alluvial soil x
Many cities

Sunny semitropical climate
Manufacturing x
Large market x
Available money x
Plenty of sunshine
Tourist attraction

STUDENT READING LIST FOR CHAPTER 9

NON-FICTION

**Aitchison, A., & Utley M., North America by Plane and Train,Bobbs,1937.The traveler is taken to the orange groves in Southern California; and a trip to a raisin grower is arranged through the pictures and reading material.

FICTION

**Angelo, V., Hill of Little Miracles, Viking, 1942. Ricco in his effort to overcome his handicap and to be an artist, ties a brick to his leg every night.

**Dean, G., Riders of the Gabilans, Viking, 1944. Rounding up cattle and cattle rustlers is only a part of the job for cowboys in central California.

*Garthwaite, M., Shaken Days, Messner, 1952. A girl conquers her fears during the great San Francisco earthquake.

**Gates, D., Blue Willow, Viking, 1948. To Janie no place was home; she moved when the crops needed to be picked.

**Gates, D., Sarah's Idea, Viking, 1938. Sarah is shocked when she finds "her ranch" is not a ranch for cattle but for prunes. She schemes to fill the stalls in the barn anyhow.

*Lenski, L., San Francisco Boy, Lippincott, 1955. Felix misses his friends when he moves to the city and makes up for it by continually getting into trouble.

**Montgomery, R., Hill Ranch, Doubleday, 1951. In an effort to save their ranch, Sara and Obie find that,beginning with the picking of the cherries, the summer is one long battle.

***Oakes, V., Desert Harvest, Winston, 1953. A true-to-life story of the contribution of the Japanese in the Central Valley of California.

***Sargent, S., Pipeline Down the Valley, Dodd, 1955. A spoiled boy achieves a new outlook in this story of engineering in the San Joaquin Valley.

*Sayers, F., Ginny and Custard, Viking, 1951. Ginny finds southern California fascinating with its Spanish names and Mexican food. Her best find is a yellow cat named Custard.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 9

California And Its Natural Resources, (mp, color, sound, 16 min, #64). From vegetables and fruits to steel and petroleum.

California Boomtown, 1948 (mp, b&w, sound, 16 min, #45). Pictorial record of Los Angeles which presents many problems of city life peculiar to this area of California.

Central Valley of California, 1954 (fs, color, 43 fr, #15). A regional study of how the mild climate and fertile soil make this a rich agricultural area.

Golden Harvest, 1952 (mp, b&w, sound, #18). The citrus fruit industry in California, showing the amount of work necessary before the fruit ripens on the tree.

Grapes, 1954 (mp, color, sound, 11 min, #11). Illustrates growing and drying of different varieties of grapes in the central valley of California.

Life in Mediterranean Lands (California), 1949 (mp, b&w, sound, 10 min, #20). Explains the causes of sunny semitropical climate and shows how the people in California live and adapt themselves to their environment.

Life in the Central Valley of California, 1949 (mp, b&w, sound, 10 min, #20). Water, dams, and wells aid man in his conquest of nature in this hot and dry section.

San Francisco, 1948 (mp, b&w, sound, 16 min, #45). An entrance to the vast lands of the Pacific and the doorway to Oriental trade.

Then and Now in California, 1951 (fs, color, 43 fr, #57). Activities of man, the natural geography, and what has occurred in the past is used to explain the present.

FEATURE: CREAM OF THE LAND (pp. 190-193)

Many students think the country of Chile is shaped like a string bean. Because Chile extends through 37° of latitude, it contains several climatic regions. The most prosperous part is the sunny semitropical region.

……

FOR YOUR OWN READING

You may want to refer to the following book for additional background information about sunny semitropical Chile.

Preston James, Latin America, Ch. 8, "Chile," section on northern middle Chile.

……

MAJOR QUESTION

There are many similarities between sunny semitropical Chile and other sunny semitropical lands, especially California. You may want to use the Major Question to point out these similarities and to demonstrate how this section of Chile has developed into a prosperous land.

PRIMARY OBJECTIVE	MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	In what ways is the sunny semitropical section of Chile the most prosperous part of the country?

Agriculture	Manufacturing and Commerce
Large Rich Farms: Haciendas range from 500 to 50,000 acres. 1. Mestizos are the workmen. 2. Crops are many and varied, similar to those in California.	Important Cities: Santiago, the capital, is located in a central valley. It is the educational and manufacturing center. Valparaiso is the chief port of Chile.

SUGGESTIONS FOR TEACHING (pp. 190-193)

The reading material contains several difficult words. You might have your students pay special attention to Incas, haciendas, mestizos, eucalyptus, adobe, and ascensors. A short map drill, similar to the map studies for the various chapters, could be planned around the map on p. 191. You will want to check whether your students can recognize certain topographic similarities between Chile and California. Finally, your students may find the "Checking Up" questions on p. 193 a challenging guide for checking on their individual reading.

SUGGESTED ANSWERS FOR FEATURE, (pp. 190-193)

"Checking Up", p. 193

1. The average hacienda has about 25,000 acres. The average farm in California has about 230 acres; the farms around the Mediterranean Sea are seldom more than 10 acres.

2. Central Chile has a climate like that of the old Mediterranean lands and the Great Valley of California. Crops too are similar; citrus fruits, olives, grapes, wheat, barley, and alfalfa are raised. There are rich alluvial fans all through the valley, and water from melted snow is used for irrigation. But Central Chile is different in several ways. Since Chile is south of the equator, the seasons are just the opposite of the seasons in California and around the Mediterranean Sea. The farms are very large; even the smaller ones have 500 acres or more. The mountains of Chile are not terraced for farming as are the mountains in the Mediterranean area.

3. Santiago, the capital of Chile, lies in the central valley. It is a very old and beautiful city. It is the leading educational and manufacturing center. Valparaiso is the great seaport of Chile. It is on the coast where the mountains meet the sea. The city rises like the seats of a stadium up the steep mountainside. Elevators carry people from one street level to another.

STUDENT READING LIST FOR FEATURE (pp. 190-193)

NON-FICTION

*Greenbie, S., Between Mountain and Sea, Chile, Row-Peterson, 1943. Life in a long, narrow country with a variety of climates has many different activities.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 190-193)

Chile, 1940 (mp, b&w, sound, 11 min, #23). While this film deals with all of Chile, it concentrates on agriculture in the Central Valley.

Chile, (fs, b&w, 59 fr, #23). The agricultural estates in the Central Valley make up the major portion.

Fundo In Chile, 1945 (mp, b&w, sound, 21 min, #65). Life on one of the great fundos, or ranches, showing workers, methods of farming, and the activities of church and school.

FEATURE: LAND OF THE LITTLE KARROO (pp. 193-195)

On the southwestern tip of Africa, there is a small sunny semitropical region. The climate, the ocean, and the topography are very similar to those in California and Chile. You can point out to your class that Europeans have been attracted to this area of Africa for over 300 years. Today this region contains a mixture of people.

. . . .

FOR YOUR OWN READING

The following book will furnish additional information about the sunny semitropical section of Africa.

L. Dudley Stamp, Africa: A Study in Tropical Agriculture, pp. 465-474.

. . . .

MAJOR QUESTION

Many times the mixture of peoples in a place, such as the sunny semitropical section of Africa, is confusing to students. The Major Question suggested for this Feature may clarify thinking about the people and their occupations.

PRIMARY OBJECTIVE :		MAJOR QUESTION :
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	→	What types of people live and work in the sunny semitropics of Africa?

Europeans	Occupations	Non-Europeans	Occupations
Afrikaners	Farmers Ranchers Businessmen	Bantu (the African natives)	Farm and raise cattle on reservations; laborers
English		Cape Coloured (mixed Bantu and European)	unskilled and semi-skilled laborers
French		Malays (descendants of Malay slaves)	

SUGGESTIONS FOR TEACHING (pp. 193-195)

By studying the map and text material on p. 194, your students will be able to discover similarities between the ocean currents and topography of sunny semitropical Africa and similar areas in Chile and the United States. The Major Question can be answered by a careful reading of the text. You may want to discuss briefly each group of people who live in this part of Africa. The "Checking Up" questions on p. 195 can be used as a basis for your class discussion.

SUGGESTED ANSWERS FOR FEATURE (pp. 193-195)

"Checking Up", p. 195

1. Two groups of native peopleswho live in South Africa are the Bantu and the Cape Coloured. Three groups of European settlers include the English, French,

and Dutch. European settlers found the climate in southwestern Africa like that of Mediterranean lands.

2. Southwestern Africa is like Chile and California because the land has small coastal plains and mountains. This land is cooled by breezes coming in from the sea in the summer and warmed by similar breezes in the winter. The coastal plains are fertile. Among the crops grown are citrus fruits, grapes, many kinds of vegetables, and grains.

3. The people of Cape Town have tried to improve their harbor by building miles of breakwaters. Cape Town is the capital, largest city, and chief seaport of South Africa.

STUDENT READING LIST FOR FEATURE (pp. 193-195)

AUTOBIOGRAPHY

**Juta, J., Look Out for the Ostrich, Knopf, 1949. The author's adventures as a youth in south Africa brought him close to natural beauty and dangerous animals.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 193-195)

Captivating Cape Town, 1954, (mp, b&w, sound, 17 min, #29). Its harbors, docks, Table Mountain , and vineyards are pictured.

In and Around Cape Town, 1946, (mp, color, b&w, sound, 18 min, #26). Activities typical of Mediterranean regions, including farming, fruit growing, and wine making.

Land Of The Ostriches, 1954 (mp, b&w, sound, 17 min, #29). A visit to the Zwartberg Mountains in south Africa, where ostrich farming is highly developed.

FEATURE: WHEAT FOR A CONTINENT (pp. 195-197)

The two previous glimpses of Australia (in Units Two and Three) acquainted your students with people living in unfavorable surroundings. The southern section of Australia, which has the sunny semitropical climate, offers more favorable living conditions. Here, the wheat and fruit supply for the entire continent is grown.

……

FOR YOUR OWN READING

Additional background information about southern Australia can be found in the following book.

G. L. Wood, Australia, pp. 119-134. "The Wheat Industry" and "Fruit".

……

MAJOR QUESTION

The Major Question that may be asked about this feature is related to the Primary Objective of acquainting the students with the many people of the earth and the ways in which these people secure their living.

Primary Objective:		Major Question:
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	→	How is southern Australia able to produce the continent's wheat supply?

Reasons

1. Climate is ideal for growing wheat. Wet winters enable the wheat seeds to grow. Dry summers allow the wheat to ripen fully.	2. The land is flat or gently rolling, allowing the use of combines. These machines cut and thresh the grain in one operation.

SUGGESTIONS FOR TEACHING

Most students are unfamiliar with many of the place names in Australia. You may want to have your students construct a map of southern Australia similar to the one on p. 196 of the textbook. Rivers, cities, physical features, and political boundaries could be featured on the map. The "Checking Up" questions on p. 197 can be used to summarize this feature.

SUGGESTED ANSWERS FOR FEATURE (pp. 195-197)

"Checking Up", p. 197

1. The topography of southern Australia differs from that of the other sunny semitropical lands because it is almost flat, having gently rolling hills.

2. The sunny semitropical areas are important to Australians because wheat, oranges, peaches, and grapes for the continent of Australia are grown there.

3. Wheat is the leading crop in southern Australia because the wet winters and dry summers favor its growth. The land is flat, and huge combines can cut and thresh the grain very easily. Fruit is another important crop from this area.

STUDENT READING LIST FOR FEATURE (pp. 195-197)

NON-FICTION

**Irwin, W., & Irwin, D., Australia and New Zealand, Macmillan. The wheat lands in southern Australia add to the agricultural picture of life on the Island Continent.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 195-197)

Born In The Sun, 1947 (mp, color, sound, 20 min, #8). The story of the dried-fruit industry in the irrigated areas of the Murray Valley of Australia.

Loaf Of Bread, 1949 (mp, b&w, sound, 10 min, #8). The story of bread from the wheat fields of southern Australia.

The Valley Is Ours, 1953 (mp, b&w, sound, 55 min, #8). The Murray River Valley of Australia supports many people who make use of irrigation and water control.

REVIEWING UNIT FOUR

PLANNING THE REVIEW

In reviewing this unit, you can help your students to tie together all the information they have studied about sunny semitropical lands. You may want to review the Major Questions in Unit Four, stressing the Primary Objectives and the big geographic concepts and relationships. The review also helps your students to compare and analyze similarities and differences which exist in places having the same or a different climate.

As you plan your review lessons, you may want to use the suggestions which are included in the textbook in "Reviewing Unit Four" on pp. 197-198. "A Broader View" on p. 197 presents additional information which challenges your students to think critically about sunny semitropical lands and helps them to consider many concepts which are behind some current news events. The "Questions to Think About" on p. 198 re-emphasize many of the important geographic relationships.

ADDING UP IDEAS

As your review progresses, you may want to stress some of the factual information about sunny semitropical lands included in the following list:

1. The regions with sunny semitropical climate are located on the west side of continents between 30° and 40° north and south of the equator.

2. All of these regions are sunny lands.

3. The sunny semitropical climate has cool rainy winters and long, hot, dry summers.

4. The rains are brought by westerly winds which blow in winter.

5. The farmers in this climatic region have used intelligence, skill, patience, and hard work in order to grow crops successfully in these lands of summer drought. For example:

   a. Farmers have developed large irrigation projects to supply water to summer crops of fruits and vegetables.

   b. Farmers raise winter crops such as wheat and barley. These crops thrive in the cool, moist winter weather.
   c. Farmers raise drought-resistant plants such as olives.

d. Farmers have developed ways of fighting the occasional winter frosts.
e. Farmers raise sheep, goats, donkeys, and mules because they require less water and can eat the dry, scanty pasturage characteristic of these lands. In many places, the animals are driven to mountain pastures in the summer.

6. Brick and adobe are the most commonly used building materials, since most of these regions are poor in forests and stone.

7. The mild winters and abundant sunshine plus the attraction of mountains and oceans have made possible the development of the tourist and recreation industry.

8. Since ancient times, European lands have been noted for commerce.

9. The European people have made great contributions to Western civilization in art, architecture, engineering, government, literature, and religion.

Suggested Answers for "Questions to Think About," p. 198

1. In the past, the people in sunny semitropical lands have contributed to our ideas about art, architecture, engineering, government, literature, and religion. Today, the world depends on many of the crops that are grown and the products that are produced in these lands.

2. This question is answered best by having your students study your local community.

3. Your students' personal opinions on this question should be backed up by reasons.

WORKSHOP ACTIVITIES. Several interesting ideas for individual, committee, or class projects are included in "Your Geography Workshop" on p. 198. Here are a few additional suggestions:

1. Make a relief map of California using modeling clay, plaster of Paris, or papier-mâché.

2. Add to your class museum such items as models of homes, methods of transportation, clothing, and crops which are characteristic of sunny semitropical regions.

3. Prepare a mural showing some of the ideas which we have inherited from the Mediterranean area.

4. Draw some travel posters advertising vacation spots in sunny semitropical lands.

5. Keep a scrapbook of pictures and news events which tell about life in the sunny semitropical lands.

6. Build a model of a mountainside showing the various zones of agriculture found in lands around the Mediterranean Sea.

EVALUATING THE UNIT

In your unit evaluation, you will want to measure the progress each student has made toward the accomplishment of the Primary Objectives. Skills, attitudes, knowledge of factual material, and understanding of geographic relationships are important stepping stones toward accomplishing the Primary Objectives.

You may want to use the Major Questions, questions in the textbook, maps, pictures, Evaluation Exercises, statistical charts, diagrams, "Words to Understand," and reading material as the bases for your unit test.

See also Unit Test Four in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

TEACHING UNIT FIVE: WARM, MOIST LANDS

BOOKLET #7
Your Own Look Ahead. 1
Ch. 10: Our American Southland. . . . 2
Ch. 11: The Good Earth of Asia. . . . 13
Feature: Cattle Lands of S. A. . . . 24
Feature: A Garden Spot of the World . 25
Feature: A Land for Pleasant Living . 26
Reviewing Unit Five. 27

YOUR OWN LOOK AHEAD INTO UNIT FIVE

Hot summers, mild winters, and abundant, evenly distributed rainfall make the moist semitropical lands favorable for agriculture. In none of these regions previously studied is nature so friendly to the farmer. For the first time, your students will study an area where getting sufficient water is no problem. The people of the rainforests had too much. The people of the grasslands had too much part of the year and not enough the rest of the year. The people of the dry lands never had enough water. The people of the sunny semitropical lands needed water during the dry summer. But in the moist semitropical lands, the water supply is fairly evenly distributed throughout the year.

Abundant rainfall makes soil conservation very necessary in moist semitropical regions. The combination of heavy rains and tilled ground produces rapid soil erosion. Frequent rains also dissolve plant nutrients, washing them deep into the soil. People who farm in these regions find that good agricultural methods are necessary to insure continual fertility from the soil.

Your students will have an opportunity to carry out the Primary Objectives of geography by answering the Major Questions pertaining to Chapters 10 and 11 and the Features of the unit. These Major Questions and their relations to the Primary Objectives are diagrammed below.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. Generalization: The moist semitropics are the home of many people carrying on a variety of activities.	Feature (pp. 233-235), Question #1 What types of activities enable the people to make a living in the moist semitropical lands of South America? Feature (pp. 236-237), Question #1 What groups of people live in the moist semitropical lands of Africa and what products do they produce? Feature (pp. 237-239), Question #1 Why are the leading cities of Australia located in the moist semitropical region?
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings. Generalization: Skillful chinese farmers get large harvests from very small farms.	Chapter 11, Question #2 How do Chinese farmers make wise use of their land?
Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples. Generalization: There is much trade between the moist semitropical lands and the rest of the world.	Chapter 10, Question #1 What products of our Southland are needed by the people of the United States and the rest of the world? Chapter 11, Question #1 What factors have influenced the growth of industry in Japan? Why is industry dependent on other countries of the world?

Objective: To teach the value of natural resources and the need for making better use of them through conservation.

Generalization: Soil conservation is necessary to keep the moist semitropical lands productive.

Chapter 10, Question #2

In what ways are Southern farmers learning to conserve the soil?

AROUSING INTEREST IN THE UNIT

A quick review of sunny semitropical regions can be an effective introduction to the study of moist semitropical lands. You might write the name "Sunny semitropical" on the board. Under this, write "Moist semitropical". Then, ask your students, "Judging from the names, what do these two climates have in common?" (semitropical: hot summers and mild winters). After your students have suggested probable conclusions regarding similarities, you might have them look at the World Climate Map on pp. 422-423, the World Rainfall Map on pp. 414-415, and the "Climate Facts" on p. 160 and on p. 200. Direct your students to find differences and semilarities between the two climates. Some of their findings should include:

1. The sunny semitropical regions are on the west sides of continents; the moist semitropical regions are on the east sides.
2. Most of the moist semitropical lands seem to include more area than sunny semitropical regions.
3. According to the "Climate Facts" and the rainfall map, the moist semitropical regions have more rainfall. Much of this rain falls in the summer.
4. The average temperatures seem to be about the same.
5. The frost-free season seems to be longer in sunny semitropical areas.

Your students can check their comparisons by reading the unit introduction on pp. 199-200. Again, draw attention to the map on p. 199 and also have your students locate the moist semitropical lands on the World Climate Map on pp. 422-423. The "Climate Facts" on p. 200 can then be compared with the climatic statistics of your local community.

CHAPTER 10: OUR AMERICAN SOUTHLAND

YOUR OWN LOOK AHEAD INTO CHAPTER 10

In the United States, the large southeastern portion of our country has moist semitropical climate. This area is usually referred to as the "Southern States", the "South", or the "Southland".

Early in our history, cotton growing was the leading activity. As time passed, the raising of only one crop depleted the soil. When the fields could produce no more, the land was abandoned in favor of cheap, rich land to the west. The worn-out, abandoned fields quickly eroded until many acres were no longer fit for farming. The eroded fields allowed water to run off rapidly, causing rivers to flood. Homes, land, and animals were lost. Because the land was poor, the people became poor.

Today, however, the modern farmer in the South is working hard to restore the land. He works closely with conservation experts in order to make wise use of his most valuable resource, the soil.

Chapter 10 has several sub-divisions which will help your students to appreciate the value of conservation and to realize the interdependence of this region with other parts of the United States and the world.

1. "Let's Look at Maps", pp. 202-203.
2. "Over the Mountains to Tennessee", pp. 204-206, points out how the TVA controls spring floods, improves navigation on the Tennessee River, and furnishes electricity to a large section of the South.

3. "The Land of Cotton", pp. 206-210, describes the growing of cotton and the many problems faced by the sharecropper and tenant farmer.

4. "Farms of the Southern Coastal Plains", pp. 210-213, tells about other types of farming in the South: sugar cane in Louisiana, vegetables and fruits on the Atlantic Coastal Plain, and tobacco on the Piedmont.

5. "Southern Cities and Industry", pp. 213-218, examines many manufacturing and industrial centers of the South, and explains how this traditionally agricultural region is changing and becoming industrial.

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FOR YOUR OWN READING

You may want to consult one of the following books to enrich your background on the Southern states.

C. Langdon White and E. J. Foscue, Regional Geography of Anglo-America, Chs. 5, 7, and 8.
J. Russell Smith and M. O. Phillips, North America, Chs. 13 and 14, "The Cotton Belt", and Ch. 15, "The Subtropic Coasts and Florida Peninsula".

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MAJOR QUESTIONS

You may want to raise two Major Questions about this chapter. The first one re-emphasizes the concept of interdependence. The second Major Question stresses the importance of conservation. For your use in the classroom, some information is furnished for answering each of these questions.

PRIMARY OBJECTIVE		MAJOR QUESTION #1
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these people.	→	What products of our Southland are needed by the people of the United States and the rest of the world?

Product	Center
Apples	Shenandoah Valley
Wheat, corn	Piedmont Region
Rice	Southeastern Texas
Sugar Cane	Southern Louisiana
Vegetables	Coastal Plain
Fruits and tobacco	Coastal Plain
Citrus fruit	Florida
Cotton, rayon textile and clothing	Piedmont Cities

Product	Center
Furniture	High Point, N. C.
Paper	Piedmont Region
Fertilizers	Nashville, Tenn., others
Oil and natural gas	Oklahoma, Texas, Louisiana
Petro-chemicals	Gulf Coast
Inorganic chemicals	Gulf Coast
Aluminum & other metals	Gulf Coast
Climate	Florida

PRIMARY OBJECTIVE		MAJOR QUESTION #2
To teach the value of natural resources and the need for making better use of them through conservation.	→	In what ways are Southern farmers learning to conserve the soil?

Reasons	Improvements
1. Much land is ruined due to poor farming methods. a. one crop system (cotton or tobacco) b. moving west when land gave out c. poor soil erosion control d. non-use of crop rotation e. non-use of fertilizers 2. Much land is ruined by erosion. a. heavy rainfall b. abandoned, cleared land c. floods	1. Tennessee Valley Authority a. controls floods b. produces electricity c. improves navigation 2. Farming Methods a. contour plowing b. strip cropping c. use of fertilizers d. crop rotation 3. Crops a. forage crops to improve soil (1) soy beans (2) cowpeas (3) velvet beans b. variety of crops

SUGGESTIONS FOR TEACHING

In guiding your students in their search for answers to the Major Questions, you may wish to employ some of the techniques suggested for previous chapters. These techniques can easily be adopted for use with Chapter 10. Several new teaching suggestions are also presented. You may want to incorporate them in your daily lesson plans.

Arousing Interest in the Chapter. The following suggestions for arousing interest may give you some ideas for introducing this chapter:

1. A field trip, making use of some of your community's resources, is one way to secure the interest of your students. A trip outside the classroom involves some advance preparation. You will need to investigate and follow your school's policy for handling field trips.

Before proceeding with your field trip, you will need to make arrangements with the establishment which you want to visit. The personnel there will want to know the date of your visit and how many students are coming. If school busses are not furnished, arrangements should be made to secure adequate transportation. Many desirable skills can be utilized if you allow members of your class to make some of the arrangements in connection with the field trip.

If your community is located in the South, there are many places to visit which will enrich your work with this chapter. The following list may furnish you with some ideas. No doubt, you will be able to think of many more.

Furniture Plant
Paper Mill
Truck Farm
Tobacco Farm
Tobacco Auction
Tobacco Warehouse
Cotton Plantation
Steel Mill
Stone Quarry
Coal Mine
Cotton Gin
Aluminum Plant
Orchard
Fruit Packing Plant
Hydroelectric Plant
Dam
Airplane Factory
Docks and Piers
Textile Mill
Clothing Factory
Turpentine Plant
Oil Refinery
Chemical Plant
Rayon Plant

In case your community is not located in the Southland, your class can visit a place carrying on an industry that resembles an industry in the South or one which depends on the products from the South. The following list may give you some ideas.

Truck Terminal
Clothing Plant
Railroad Yards
Paint Factory
Newspaper Office
Oil Refinery
Furniture Distributor
Fertilizer Plant
Chemical Plants
Airport
Canning Factory
Large Food Store
Food Processing Plant
Aluminum Processing Plant
Makers of Metal Products
Hydroelectric Plant
Tobacco Manufacturing Plant
Farm Practicing Conservation

To make the trip a valuable learning experience, you may want to prepare guide sheets. This sheet can be checked and filled in by your students during the trip. To prepare a useful guide sheet, you will need to be familiar with the things your class will encounter. You may even want to take an exploratory trip alone before taking your class.

The sample guide sheet included here was prepared for a trip to a truck terminal. You may want to use it as a model in preparing your own guide sheet.

GUIDE SHEET FOR FIELD TRIP TO A TRUCK TERMINAL

Directions: On your way to the terminal, check off on the following list any methods of transportation you see. If you see any methods of transportation not included on the list, add them in the space provided.

_____bus
_____street car
_____truck
_____auto
_____tractor

_____airplane
_____train
_____horse
_____...............
_____...............

Directions: While visiting the terminal, you will see and hear many things. If you see any of the following things, put a check mark beside it. Add other things to the list.

_____cotton
_____vegetables
_____fruit
_____canned goods
_____tobacco
_____...............

_____paint
_____furniture
_____steel products
_____aluminum products
_____chemicals
_____...............

_____fertilizers
_____clothing
_____textiles
_____motors
_____machinery
_____...............

Directions: Look at the license plates of the various trucks in the terminal. List some of the states represented.

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Directions: List specific fruits and vegetables that you see at the terminal.

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Directions: On the following list, check off the places that you see on the way home. Add other interesting places which are not listed.

_____paint factory
_____furniture store
_____newspaper office
_____fertilizer plant
_____...............

_____oil refinery
_____canning factory
_____textile mill
_____clothing plant
_____...............

Assignment: Examine the list of products and vegetables that you checked at the truck terminal. Can you determine from which area of the United States they came?

In the classroom lesson following the field trip, you might start a discussion about the produce, and manufactured goods which your students observed. Many of the items seen were undoubtedly produced in the South. Some of your students will probably be curious to find out more about the region from which these products came. With their curiosity aroused, your students are ready to begin their study of the chapter.

2. You may want to show a film or filmstrip which illustrates some aspect of life in the South. Several carefully chosen items are listed in the "Selected Audio-Visual Aids for Chapter 10" on p. 13 of this booklet.

3. Personal experience is a good interest-getter. You may want to tell your class about a trip you have taken through the South, or one of your students might tell of an experience he had while visiting in one of the Southern states.

Let's Look at Maps (pp. 202-203). After reading and discussing the chapter introduction on pp. 201-202, your class will need to be guided in their map study on pp. 202-203. They will have a chance to review many of their previously developed map skills and learn several new ones.

Map Skills

Skills	Reviewed	New
Direction	N,S,E,W Latitude	
Distance	Scale -- recognition of relative differences	
Location	Mountains	
Symbols	State boundaries, bay, gulf, ocean, plain, mountains, river, river mouth, plateau, delta, tributary, cities	Mountain ridges
Legend	Shading to indicate population and rainfall (relative differences) Shading to indicate rainfall (in inches)	Hatching to indicate moist semitropical region
Comparison & Inference	Rainfall of two areas compared Population density of three areas compared.	Inference about drainage and healthfulness of highlands

Suggested Answers for Map Study

1. While tracing the northern boundary of the moist semitropical region, you pass through the states of Delaware, Maryland, Virginia, Tennessee, North Carolina, West Virginia, Kentucky, Illinois, Missouri, Arkansas, Oklahoma, and Texas. Along the Gulf Coast are the states of Texas, Louisiana, Mississippi, Alabama, and Florida. Eighteen states have part or all of their land in this climatic region.

2. The name of the large plain that stretches along the southern coast of our Southland is the Gulf Coastal Plain. It gets its name from the Gulf of Mexico which it borders.

3. The Piedmont is higher and rolling land. The water drains off more quickly than it does on the coastal plains.

4. The directions point out the mountains and valleys of the South.

5. The Mississippi River flows southward through the large plain in the interior of the United States. It flows into the Gulf of Mexico. Several large tributaries of the Mississippi River include: Arkansas River, White River, Missouri River, Ohio River, and Tennessee River. The Ouachita Mountains are in Arkansas and Oklahoma. The Ozark Plateau is in Arkansas and Missouri.

6. Your students will see many cities in the South as they examine the map.

7. The rainfall is fairly evenly distributed over the whole moist semitropical region. This area receives between 40"-80" each year. Rainfall around the Mediterranean Sea is about 20"-40" each year. The moist semitropical region of the United States receives a great deal more rainfall than the sunny semitropical lands around the Mediterranean Sea.

8. There is no great difference in population density, except on the Piedmont where there are more people.

Reading About "Our American Southland" (pp. 204-218). So far in this manual, many suggestions have been given to help you guide students of differing abilities. Here is another suggestion for handling individual differences in reading ability. This method calls for the formation of reading groups. Many teachers have found this teaching method very effective.

In order to form effective reading groups, you will need to consult the students' reading records and use your own experience and judgment. A maximum of three reading groups seems to work best. Thus, your three groups could consist of *reluctant, **average, and ***advanced students. By grouping these readers, you will be able to work separately with each group and give the type of attention that is needed by each type of student.

You might have your *reluctant group read pp. 204-206 silently at first to get the general meaning. While this group reads this selection silently, you can give the other groups their assignments. Suggested assignments for these groups will be given below as each group is discussed.

Once the *reluctant group has finished reading, you can develop the meanings of difficult words included in the assignment. They should be able to get the meaning of most of the words from the context. Some of the words you will want to stress are:

Piedmont
plateau
torrents
tributaries
navigation
hydroelectric
conservation
reservoirs

This group might then read the selection again orally. By taking turns, each student can read one paragraph. This procedure allows opportunity for discussion. When the second reading has been concluded, have the group answer orally the "Checking Up" questions on p. 206. Have the students verify their answers by reading the part of the text material which answers the question. As you proceed to work with the next group, you can have the *reluctant group fill in the names of the Southern states on an outline map. Caution them to use either the correct spelling or the correct abbreviation. They can use the map on p. 399 for reference. A similar procedure can be followed with the material on pp. 206-218. You might continue to have your *reluctant students verify the answers to the "Checking Up" questions on pp. 210,213, and 218. The maps on pp. 207 and 214 can be used as source material for additional student map work.)

Meanwhile, the **average group will have been reading pp. 204-218 without your help. When the "Checking Up" questions have been completed, these students can start to fill in the names of the states on the outline map. You can then hear answers to the "Checking Up" questions, making sure that the students verify their answers. Following the reading, your **average students can complete their outline maps adding some water bodies and rivers.

During the same time, the ***advanced group will have finished their reading, "Checking Up" answers, and outline map. This group might also prepare a set of flash cards containing some of the geographic concepts of this reading section. Some examples are:

TVA
Apple Pie Ridge
Shenandoah Valley
hydroelectric
soil conservation
contour plowing
strip cropping
Oak Ridge

The "Questions to Think About," "Words to Understand," and "Among Ourselves" on p. 218 can furnish additional material for this group.

When you check up on the***advanced group, you will probably want to hear the answers to the "Checking Up" questions as well as their choice of important geographic concepts in the selections. This group's discussion can probe more deeply into the important concepts contained in this chapter.

To summarize the lessons, you might have the class participate as a whole. You can use the flash cards which were prepared by the ***advanced group. The information on the flash cards can be explained, located, or discussed by members from all three groups. In this way, you have given each group individual attention and been able to deal better with the differences in your class.

Enrichment Activities. Some suggestions are included below which the groups not immediately engaged in reading will be able to do on their own to further the aims of the lessons.

The *Reluctant Group

1. Outline map showing the Southern states.
2. Drawing of cotton in different states of growth.
3. Making a model of a cotton gin.
4. Poster showing how to combat the boll weevil.
5. Advertisement for Florida.
6. List of Southern cities and their importance.
7. Putting important cities on outline map.
8. Making a products map by pasting pictures or the actual products on the map.
9. Dramatization of life of cotton farmer, sharecropper, or sugar cane farmer.

The **Average Group

1. Any of the things listed for the *Reluctant Group.
2. Scrap book on one of the Southern states.
3. Outside reading.
4. Special report on some phase of the chapter.
5. Write for more material on soil conservation.
6. Learn the capitals of the states.
7. Identify states by their silhouettes cut from cardboard.

The ***Advanced Group

1. Any of the things listed for the other two groups.
2. Draw diagrams of a hydroelectric plant, some soil conservation methods, rice farming, oil refinery, etc.
3. Investigate the reason for the importance of the "Fall line" between the Piedmont and Coastal Plain regions.
4. Prepare a travel plan for a tour of the South, describing some of the features.
5. Draw a map following the route of the plane trip described on pp. 213-218.
6. Report on the uses of petro-chemicals and inorganic chemicals like butadiene, toluene, acetic acid, caustic soda, soda ash, and chlorine.

You may also want to have your groups work on oral reports or supplementary reading. The "Student Reading List for Chapter 10" on page 12 of this booklet lists many interesting books for additional reading. The projects included in "Your Geography Workshop" on p. 240 of the textbook will furnish your groups with additional ideas for enrichment material.

Local Geography. As your students study parts of the United States, they should be encouraged to compare the regions studied with their local community. Much of this type of comparison can be done through the "We and They" or "Among Ourselves" exercises at the ends of the chapters. You may also want to devote some class time to a study of local geography.

Your students can study the geography of their community either through a field trip or in a personal assignment. A geographical description of the local community complete with drawings might be prepared. Your students might consider some of the following questions in their observations and descriptions.

NATURAL CONDITIONS

1. Where is your community located in relation to an ocean, a river, stream, or lake? Is it on a coast, in the interior of a continent, or on an island? What is the latitude and longitude of your community?

2. How would you describe the topography of your community? Can your area be described as mountainous, hilly, a lowland, or an upland?

3. What kind of soil or soils are common to your community? (clayey, sandy, rocky, etc.) Collect samples of the soil.

4. Are there any minerals (coal, petroleum, iron ore, etc.) found in or near your community?

5. What kinds of rock, if any, are found in your community? (limestone, sandstone, shale, granite, marble, etc.)

6. Does your community have a good water supply? What is its source?

7. In what climatic region do you live? Describe the yearly and seasonal temperature, length of the frost-free period, yearly and seasonal rainfall, kinds of storms, prevailing wind direction, and the amount of sunshine.

CULTURAL CONDITIONS

1. What kinds of building materials were used to erect homes and other buildings in your community? What kinds of roofs do the buildings have? Are they flat or are they peaked?

2. What kinds of clothing are worn in your community? In the winter? In the summer?

3. What types of foods are raised in your community?

4. What are the chief means of transportation in your locale?

5. What are some of the leading occupations? What do most of the people do for a living? What do they do for recreation?

RELATIONSHIPS

These observations of your local community become geography when some relationships are apparent among them. The following questions may help you to see some of the relationships.

1. What features of the natural environment have affected the way houses and other buildings have been constructed? (Materials, kinds of roofs, location, etc.) Perhaps the materials have come from some other place. Why?

2. Why do you wear the kind of clothing you do? (temperature, amount of rain, seasonal changes, etc.) Do you depend on people living in other environments for your clothing? Why?

3. What features of the natural environment affect the production of food in and near your community? (soil, surface, rainfall, length of frost-free season, etc.) For what foods do you depend upon other people living in a different environment? Why?

4. How is transportation affected by the natural environment? How has the building of roads, highways, and railroads been affected by conditions in the natural environment? (the way roads are built, routes followed, need of bridges, special gutters, protection from snow, etc.)

5. How are the leading occupations in your community related to the natural environment? (mining is related to mineral deposits, farming is related to topography and soil, etc.)

You may wish to discuss many other aspects of your community such as government, various religions, recreation, and education. These are a part of the cultural environment and affect ways of living.

SUGGESTED ANSWERS FOR CHAPTER 10

"Checking Up", p. 206

1. Virginia's finest farming land is located in the Shenandoah Valley. Besides growing crops, farmers raise sheep on the higher, more rugged slopes. Apple Pie Ridge is in the Shenandoah Valley, beginning in northern Virginia and extending northeast into West Virginia.

2. The southern farmers have learned to use strip cropping and contour plowing to help prevent soil erosion.

3. The TVA is the Tennessee Valley Authority. It is a government agency which was created to build dams, lakes, and generating stations on the Tennessee River. It has helped industry and farmers in the South by controlling spring floods, improving navigation on the Tennessee River, furnishing hydroelectric power, and helping to prevent soil erosion.

"Checking Up", p. 210

1. The Southern states have ample rainfall, fertile soil, and plenty of sunshine which is needed to grow cotton.

2. A sharecropper is a tenant farmer who pays his rent by giving the owner a share of the crop. The owner arranges credit for him with the local store so that he can secure food and clothing. The sharecropper could make his life less difficult by not depending entirely upon the money he gets for his cotton to buy food and other supplies.

3. In late winter, the cotton farmer prepares his land for planting. Early in the spring, he plants the cotton seeds thickly. When the young cotton plants are about 6" high, they are thinned out so that the plants will have room to grow well. This thinning process is called "chopping. During the growing season, the fields must be cultivated from three to nine times as the weeds grow very rapidly. Also during this time, the cotton farmer dusts and sprays his crops to kill dangerous insects. The farmer can take it easy from blossomtime until the cotton bolls burst open. No more cultivation is needed and all field work stops. The busiest time is the picking season around September or early October. A cotton field must be picked over several times as all the bolls do not ripen at once and the bolls grow hidden among the leaves. Then the cotton

is taken to the gin where the seeds are removed, and it is packed into large bales.

4. On the large cotton plantations, airplanes are hired to fly low over the fields, spreading a poisonous powder to kill dangerous insects.

"Checking Up", p. 213

1. Sugar cane growers in Louisiana face two problems. The frost-free season is too short for best results and many times the cane is cut before it has matured. Growers in Cuba and other tropical lands get six to eight crops from one planting, but Louisiana sugar cane growers must plant every year or two. This increases the cost of raising sugar cane since much more labor is required.

2. Many tourists visit Florida each year to take advantage of the warm climate. These tourists spend money for accommodations, food, and entertainment. In this way, Florida is actually selling its climate.

3. Soy beans, velvet beans, and cowpeas are the new crops which have been introduced in the Piedmont area of North Carolina, South Carolina, and Georgia. The soy bean yields a valuable oil, and all the crops help to rebuild the soil and prevent erosion.

4. Most of the tobacco farms and truck farms along the Gulf Coast and the Atlantic Coastal Plain are small because the crops require a great deal of attention and hand labor.

"Checking Up", p. 218

1. Many of the furniture makers of the South are also called lumber "farmers" because they own and operate their own forests. They replant the trees as they are cut and follow other conservation measures to make sure there will be a future supply of lumber.

2. The manufacture of cotton textiles was the first big industry to develop in the South. It developed because the raw material, cotton, was near at hand. The center of this industry today is located in the Piedmont district, where there is abundant power and cheap land.

3. Birmingham, Alabama, is located near a supply of coal, iron ore, and limestone. These are the main materials for the modern iron and steel industry.

4. The Gulf Coast industrial district has several important advantages. Among them are plentiful supplies of raw materials, good ocean transportation, a large labor force, and cheap power from natural gas. Some of the new industries include the petro-chemical industry, the inorganic chemical industries, and industries for processing different metals.

"Questions to Think About", p. 218

1. This question requires your students to make use of their research skills.

2. Cotton, rayon, and other textile industries have developed in the Piedmont region because there is a plentiful and cheap supply of hydroelectricity and coal for power. New mills equipped with modern machinery have been built where land is cheap and taxes are low. In addition, the raw materials needed for cotton and rayon textiles are near at hand. Rayon and other fiber manufacturers have found abundant water free of minerals and other impurities. Many of the mills lie along streams into which waste can be dumped. The textile industry provides the materials for the clothing industry, which has also taken advantage of the cheap power, cheap land, and low taxes in order to build factories.

3. The South has become a leading pulp and paper manufacturing area because there are vast forests of southern pine along with cheap hydroelectricity and pure water from mountain streams. The climate helps this industry because the trees grow to full lumbering size in 30 to 40 years. In 15 to 20, the trees are big enough for pulpwood. These are short growing periods for trees. As a result, trees can be grown as a crop.

4. The winter climate in the South is very mild and attracts thousands of winter visitors every year. Florida is the center of this winter tourist trade. For this reason, football games can be played on New Year's Day and Ringling Brothers circus winters in Sarasota, Florida.

5. Some of the important cities of the South are:

Norfolk, Virginia -- port, cotton textile and fertilizer manufacturing
Richmond, Virginia -- marketing and manufacturing of tobacco
Winston-Salem, N. C. -- tobacco industries
High Point, N.C. -- furniture manufacturing
Atlanta, Ga. -- iron and steel mills, brick and tile factories, greatest railroad center of the South
Birmingham, Ala. -- iron and steel industry
Chattanooga and Knoxville, Tenn. -- iron and steel mills, brick and tile factories, textile mills, woodworking plants
Nashville, Tenn. -- trading center and fertilizer manufacturing
Oklahoma City, Okla. -- oil refineries
Tulsa, Okla. -- oil refineries
Dallas, Texas -- leading commercial, financial, and style center
Fort Worth, Texas -- cotton seed mills, flour mills, oil refineries, aircraft factories, cattle stockyards
Houston and Galveston, Texas -- "twin ports," oil refineries and other industries
New Orleans, La. -- chief commercial center of the lower Mississippi Valley, port, tourist center
Mobile, Ala. -- manufacturing and shipping center
Memphis, Tenn. -- river port and industrial center
Tampa, Fla. -- port and tourist center
Miami, Fla. -- America's great vacation center

"Among Ourselves," p. 218

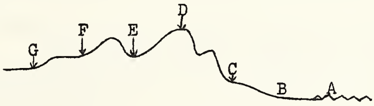
Your students can answer these questions by comparing the Southland with their local community.

EVALUATION EXERCISES

To Check on Your Students' Understanding of Geographical Terms

Directions: This is a cross-section drawing of the topography of the Southern States. Match each term with the proper letter on the drawing.

1. (D) Mountain ridge
2. (F) Plateau
3. (A) Ocean
4. (C) Piedmont Pleateau
5. (G) Interior Plain
6. (B) Coastal Plain
7. (E) Valley



To Measure Your Students' Understanding of Conservation Terms

Directions: In the following list, place an x in front of any item which is a soil conservation method.

x crop rotation
abandoning land
x planting soy beans
x strip cropping
chopping
x fertilizing

x planting cowpeas
plowing with a mule
x contour plowing
one-crop system
clearing the land
plowing uphill

To Measure Your Students' Understanding of Vocabulary Words

Directions: Match each statement in Column I with the correct word in Column II. Answer by using numbers and letters only. There are two words you will not use.

Column I

1. A destructive insect (c)
2. Thinning young cotton plants (b)
3. A type of tenant farmer (a)
4. Products made from oil (e)
5. Power made from water (f)

Column II

a. sharecropper
b. chopping
c. boll weevil
d. Piedmont
e. Petro-chemical
f. hydroelectricity
g. rayon

To See Whether Your Students Know Some of the Important Southern Cities

Directions: Complete the following chart by filling in the state in which each city is located, the correct abbreviation of the state, and why the city is important. (*Reluctant students can give the proper spelling and the proper abbreviation of the state in which these cities are located. **Average and ***advanced students can tell why the city is important.)

City	State	State Abbreviation	Importance of City
Richmond	Virginia	Va.	Manufacturing and tobacco
New Orleans	Louisiana	La.	Port and manufacturing
Birmingham	Alabama	Ala.	Iron and steel
Tulsa	Oklahoma	Okla.	Oil and natural gas
Tampa	Florida	Fla.	Port and tourist trade

STUDENT READING LIST FOR CHAPTER 10

NON-FICTION

**Aitchison A., & Utley, M., North America by Plane and Train, Bobbs,1937. This book presents a closer look at rice and cotton farmers, oil men, and other workers in the South.

*Banta, R., Life in America: The South, Fideler, 1951. Beautiful photographs give a well-rounded picture of the South, its people, their occupations, and ways of life.

FICTION

***Caudill, R., House of the Fifers, Longmans, 1954. Monica finds that a vacation with relatives in Kentucky increases her love for the country and prepares her to face an innovation in her life.

**Cormack, M., & Bytovetzski, P., Swamp Boy, McKay, 1948. In an effort to free himself from the clutch of the Okefinokee, Clint Sheppard makes a discovery that draws his life even closer to the swamp.

***Farris, J., Ramey, Lippincott, 1953. What will Ramey do after he sees his father cut down by a bully's knife?

**Fox, G., Mountain Girl, Little, 1932. Sairy Ann is faced with a desperate decision regarding her future. Will she be able to get "book larnin" and save the mountain people from their fear of "foreign" ways?

**Fox, G., Mountain Girl Comes Home, Little, 1934. More adventures with Sairy Ann when she returns as a nurse to her mountain home.

***Hall, R., Davey, Duell, 1951. In this story about share croppers in Florida, a daring rescue proves that Davey is not so puny after all.

*Judson, C., Petar's Treasure, Houghton, 1945. Petar's dangerous advertures in trying to find his dog and buried pirate's treasure had to be worked in between long hours in a Biloxi, Miss., shrimp factory.

*Lansing, E., Shoot for a Mule, Crowell, 1951. Jeb's wish for a mule instead of a pony led to a shooting in his Kentucky mountain home.

*Lattimore, E., Bayou Boy, Morrow, 1946. Living near a bayou provides Louis Brown with much entertainment and excitement.

**Lensky, L., Bayou Suzette, Lippincott, 1943. Alligators, wild cats, floods, and an Indian friend bring a busy life to Suzette.

**Lenski, L., Blue Ridge Billy, Lippincott, 1946. What was the mystery of the hideout at No man's Cove? It took a panther hunt one dark night for Billy to find out.

**Lenski, L., Boom Town Boy, Lippincott, 1948. Fences and gardens were torn down and derricks rose up when oil was discovered in the back yard of a young Oklahoma boy.

**Lenski, L., Cotton In My Sack, Lippincott, 1949. Joanda had to solve the mystery of the lost load of cotton in order to save her family from poverty.

**Lenski, L., Strawberry Girl, Lippincott, 1945. Birdie Boyer fights dry weather, grass fires, roving hogs, and stray cattle to achieve her goal.

*Powell, M., Jareb, Crowell, 1952. Jeb had to admit his dog was a no-account hound. But he had to find a way for Sawbuck to earn his keep.

*Simon, C., Robin On the Mountain, Dutton, 1934. Robin became bored moving from place to place with his sharecropping father and so built his own cabin and settled down in Possum Kingdom.

*Stuart, J., Beatinest Boy, McGraw, 1953. David was willing to do everything possible to get enough money to buy his grandmother a Christmas gift.

**Wright, A., Summer at Buckhorn, Viking, 1943. Five young Yankees invade Virginia but are halted by their own Aunt Wig who was more than a match for them.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 10

Birmingham -- Industrial Center of the South, 1951 (fs, color, 25 fr, #24). Scenes of industry and life in the "Pittsburgh of the South .

Cotton, 1946 (mp, b&w, sound 11 min, #23). The making of cotton cloth, from the picking of the boll in southern fields to the packing and shipping of the finished cloth.

Cotton, 1949 (fs, b&w, 85 fr, #23). The story of cotton, from the picking until it is woven into fabric.

Cotton Picking and Ginning, 1948 (mp, color, b&w, sound, 11 min, #34). Hand picking, machine picking, ginning, grading, compressing, and shipping of cotton.

Cotton Planting, 1948 (mp, color, b&w, sound, 11 min, #34). Preparation, cultivation, and care of cotton.

Evangeline Land, 1949 (mp, color, sound, 30 min, #3). Louisiana lowlands, including shrimp and oyster fishing, sugar cane and rice growing, trapping, and gathering.

Geography of the Southern States, 1952 (mp, color, b&w, sound, 11 min, #20). Basic geographic elements of climate and soil are related to human activities and change.

How We Get Our Cotton, 1950 (fs, b&w, 43 fr, #69). From growing, harvesting, ginning, and baling to textiles.

Mississippi River (Lower River), 1948 (mp, color, b&w, sound, 14 min, #2). Its importance as a means of transportation, danger of floods, importance to the agriculture of the south central region.

New Fields in the Old Dominion, 1949 (mp, color, b&w, sound, 23 min, #19). Links the Virginia agriculture of today with the agriculture of the nation.

The South, (fs, b&w, 64 fr, #37). Photographs and maps show the physical features, natural resources, industries, and cities.

Southeastern States, 1942 (mp, b&w, sound, 11 min, #23). Outlines living patterns in the South from bluegrass and cotton to cities and industry.

Southeastern States, 1953, (set of 4 fs, color, #58). Agriculture", 63 fr; "Resources and Manufacturing", 60 fr; "Subtropical Coastal Lands", 58 fr; "Subtropical Coastal Lands and Western Texas", 60 fr.

Southern Highlanders, 1947 (mp, color, sound, 25 min, #30). Living habits and family life of people in Tennessee and North Carolina.

Then and Now in Cotton Belt, 1951 (fs, color, 44 fr, #57). Then and Now Along the Lower Mississippi, 1951 (fs, color 42 fr, #57). Then and Now in Old South, 1951 (fs, color, 44 fr, #57). Activities of man, the natural geography, and what has occurred in the past is used to explain the present.

U. S. Regional Geography, 1952 (fs, color, #69). Three filmstrips in this series represent the southern states: "Atlantic Plain and Piedmont", "Gulf Plains", "Appalachian Highlands".

Valley of the Tennessee, 1944 (mp, b&w, sound, 30 min, #65). Change in agricultural methods made possible through flood control by TVA.

CHAPTER 11: THE GOOD EARTH OF ASIA

YOUR OWN LOOK AHEAD INTO CHAPTER 11

The moist semitropics of Asia are very densely populated. Your students may be surprised to learn that one out of every four persons in the world is Chinese.

The Chinese people have an ancient background dating to about 2000 B.C. When Chinese civilization was enjoying a high level of development, around 1200 B.C., many of the people of Europe were still living in tribes.

In Japan, too, the population pressure is very great. While not as ancient as the Chinese culture, the culture of Japan is also old. For many years, the people of Japan shut themselves off from the rest of the world. They allowed no one to enter their island nation, and they allowed no one to leave. Finally, the United States persuaded Japan to trade with the rest of the world. In less than fifty years, despite severe drawbacks, Japan turned from a backward agricultural country into one of the leading industrial nations of the world.

In Chapter 11, your students will see how the people in these two moist semi-tropical areas have adjusted to and controlled their natural environment. The various subtopics will aid your students in their reading.

1. "Let's Look at Maps", pp. 220-221, 228-229.

2. "The Hard-Working Japanese Farmer", pp. 222-225, explains how the Japanese farmers are able to produce crops with little equipment on the scattered fields of very small farms.

3. "Japan's Bustling Cities", pp. 225-227, tells about the advantages and disadvantages of manufacturing in Japan.

4. "Behind the Bamboo Curtain", pp. 227-232, describes the life of the farmer in various parts of southern China, and explains how the industrial growth of China has been hindered by lack of transportation.

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FOR YOUR OWN READING

Some books which you may want to consult are listed below.

George B. Cressey, Asia's Lands and Peoples, Ch. 5, "Agriculture in China", Ch. 7, Regions of South China , Ch. 9, 10, 11, 12, "Japan".
R. J. Russell and F. B. Kniffen, Culture Worlds, Ch. 43, "Central and Southern China", Ch. 45, "Japan".

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MAJOR QUESTIONS

"The Good Earth of Asia" contains several important ideas about the interdependence of all peoples in the modern world and the interrelationship between man and his natural environment. You may wish to raise Major Questions in order to emphasize these concepts. The questions and their answers may help you as you plan your daily lessons.

PRIMARY OBJECTIVE	MAJOR QUESTION #1
To promote place by emphasizing the interdependence of all peoples in the world and the problems of these peoples.	What factors have influenced the growth of industry in Japan? Why is industry dependent on other countries of the world?

Industry in Japan

Industrial Centers: Tokyo and Yokahama Kobe, Osaka, and Kyoto Nagasaki	Disadvantages: Lack of valuable minerals iron ore zinc petroleum copper tin lead coal Lack of other raw materials
Products: Textiles Iron and steel Metal products Machinery Novelties and toys Chemicals	Advantages: Developed hydroelectric power Nearness to ocean transportation Good labor supply Good harbors

PRIMARY OBJECTIVE	MAJOR QUESTION #2
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings. →	How do Chinese farmers make wise use of their land?

Methods	Region
Double cropping: The planting of the same crop in the same field twice in one year	Yangtze Valley: Two rice crops per year Other summer crops -- cotton, peanuts, beans, vegetables Other winter crops -- wheat, barley, beans
Interplanting: The planting of one crop between the rows of another crop or growing two crops in the same field at once	Red Basin: Crops about the same as the Yangtze Valley with the addition of fruit
Terracing: Cutting level fields out of the hillsides to get more available land	Hills and Mountains: Many upland crops -- rice where land for paddies and water is available; also tea
Paddies: Level fields with dikes built around them to hold water for rice growing	Si Valley: Crops about the same as in the Yangtze Valley with the addition of citrus fruits

SUGGESTIONS FOR TEACHING

In this chapter, your students will study about two separate groups of people, the Japanese and the Chinese. Some new suggestions are offered to aid you in planning your lessons about "The Good Earth of Asia" but many of the previous suggestions can be adopted for use with this chapter.

Arousing Interest in the Chapter. Some suggestions for securing interest and raising questions about the moist semitropical regions of Asia are listed. You might want to try one or more of these ideas.

1. Have a group of your students prepare a dramatization about a day in the life of a Japanese farmer. The material for this dramatization could be obtained from the school or local library. Perhaps some of your students studied about Japan in elementary school and can produce a short play without doing research. Some teachers use students from classes that have studied about Japan the year before to present a skit for their present class.

This dramatization might point out such things as the native dress of the Japanese, although many European-style clothes are worn in Japan today; walking to the scattered fields; carrying the farm implements; tilling the soil; mending the dikes; taking off shoes before entering the house; sitting on the floor; eating from a low table; drinking tea; classical dances; playing games similar to checkers and cards; making the bed from quilts and mattress stores in a closet; sleeping on the floor; getting up early; eating with chopsticks; and many others.

As your class watches the short play, they should be encouraged to ask questions about the life of the Japanese farmer. These questions can be recorded and used in your future lessons.

2. Brothers or parents of your students may have spent some time in Japan as members of the armed forces. You might make an exhibit of things which they have brought back from Japan: kimonos, chopsticks, pictures painted on silk, toys, porcelain, lacquered ware, vases, shoes, umbrellas, and novelties. Such items will stimulate interest and curiosity in most of your students.

3. The pictures in the textbook might be used to observe differences between life in the moist semitropical lands in the United States and life in moist semitropical Asia. Pictures on pp. 219, 222, 223, 225, 229 and 230 contain the most striking contrasts. Your students will undoubtedly ask questions as to why these differences exist when the climates are so similar.

4. Some of your students may have seen television plays about life in China or Japan or may have seen one of the feature films which were produced by the Japanese film industry and shown in this country. These second-hand experiences with China and Japan can be the topic for your class discussion.

Let's Look at Maps (pp. 220-221 and pp. 228-229). After your students have read the introduction to the chapter on pp. 219-220 and worked out the flight problem included in the picture caption on p. 220, they will be ready to start the map study. The map study for this chapter is divided into two parts. The first part on pp. 220-221 deals mainly with the Japanese islands, while "Another Look at Maps" on pp. 228-229 concentrates on China. The maps to be used with both studies are found on p. 221. Your students will have an opportunity to practice many of their previously learned map skills.

Map Skills

Skills	Review
Direction	N,S,E,W,SE Latitude
Distance	Scale-recognition of differences
Location	North Tropic Latitude Cities Islands
Symbols	Sea, ocean, plain, mountains, plain, river, river basin, river course, cities, island, peninsula
Legend	Hatching to indicate moist semitropical regions Shading to indicate population density and rainfall (relative differences) Shading to indicate population and rainfall (density and inches)
Comparison & Inference	Rainfall of two regions compared Population density of two regions compared Latitude of two regions compared Inference about importance of cities Inference about temperature from location Inference about population density from topography

Suggested Answers for Map Study (pp. 220-221)

1. The moist semitropical lands of Asia are between 21°N and 42°N latitude. This climate region in the United States lies between 26°N to 39°N latitude. Most of the moist semitropical areas of Asia are just north of the North Tropic sun line. The temperatures are very warm during part of the year because the direct rays of the sun come very close to being directly overhead during the summer.

2. ✓ The islands of Honshu, Shikoku, and Kyushu have moist semitropical climate. The Sea of Japan, the Pacific Ocean, and the East China Sea surround these islands of Japan.

3,4. These questions require your students to follow directions.

5. The average yearly rainfall over most of Japan is 40"-80". This is about the same as the rainfall in our moist semitropical regions.

6. By comparing the population and size of Japan with the population and size of the state of California, your students can infer that there is a very high population density in Japan.

7. These cities of Japan are located near the trade routes of the Pacific Ocean. They also have good harbors.

8. There are over 250 people per square mile in Japan. The population density in Japan is much greater than it is in our Southern states.

Suggested Answers for "Another Look at Maps", pp. 228-229

1. In China, the moist semitropical region lies between 21°N and 34°N latitude. The East China Sea and the Yellow Sea border this region on the east. The

The South China Sea borders this region on the southeast.

2. Hankow and Nanking are located on the lower Yangtze River. Shanghai is near the river's mouth.

3. The lands south of the Yangtze Plain are made up of hills and mountains and are best described as "rugged".

4. The Si River flows into the South China Sea. Canton is located near the mouth of the Si River.

5. Swatow, Amoy, Minhow, and Shanghai are located along the coast of China. These cities are port cities.

6. The rainfall in this area of China is about the same as the rainfall in Japan.

7. The river plains, river valleys, and the areas along the coast are the most densely populated sections of China. The more populated areas of China have about the same population density as that of Japan. In other more semitropical sections of China, the density is less than Japan's. The population density of China's moist semitropical regions ranges from 25 to over 250 people per square mile. Our Southland contains fewer people per square mile.

Group Reading About "The Good Earth of Asia" (pp. 222-232). Reading groups were recommended as one method for your class study of Chapter 10. Some additional ideas for group reading, which you may want to continue, are presented below. Samples of classroom assignments covering four days are given. (The activities which you might supervise personally are underlined.) The method suggested here gives you an opportunity to work with each individual. When an activity is a total class activity, it is written across the full width of the chart.

FIRST DAY

Review the questions which were raised during the chapter introduction. Give out group assignments and distribute project list. (You will find a suggested project list on p. 18 of this booklet.)		
Group #1 (*Reluctant)	Group #2 (**Average)	Group #3 (***Advanced)
1. Read pp. 222-225 silently. List unfamiliar words. 2. Reread pp. 222-225 orally. 3. Answer Checking Up , p. 225. 4. Study pictures on pp. 219, 220, 222, 223, 225, 226 and make a list of all the differences you can see between our South and Japan. 5. Choose a project.	1. Choose a project. 2. Read pp. 222-225. 3. Answer "Checking Up", p. 225, and "Questions to Think About" #3, p. 233. 4. Discuss reading and answers to questions. 5. Study same pictures as Group #1. 6. Draw pictures of Japanese home; refer to p. 223.	1. Choose a project. 2. Read pp. 222-225. 3. Answer same questions as Group #2. 4. Supplementary reading (Student Reading List for chapter 11). 5. Study same pictures as Group #1. 6. Discuss reading and answers to questions.
Question and answer review of the farming methods and family life in Japan.		

SECOND DAY

Introduction of outline map and the list of items to be included on the map.		
Group #1 (*Reluctant)	Group #2 (**Average)	Group #3 (***Advanced)
1. Work on outline map. 2. Work on project. 3. Read pp. 225-227 with discussion and answers to "Checking Up", p. 227.	1. Work on outline map. 2. Read pp. 225-227. 3. "Checking Up", p. 227, "Question: To Think About" #4, p. 233. 4. Work on project.	1. Read pp. 225-227 2. Discuss reading and answers to questions. 3. Work on outline map. 4. Supplementary reading. 5. Work on project.
Drill and summary exercise in "Evaluation Exercises" on p. 21 of this booklet.		

THIRD DAY

"Another Look at Maps", p. 228-229.		
Group #1 (*Reluctant)	Group #2 (**Average)	Group #3 (***Advanced)
1. Work on project. 2. Outline map. 3. Supplementary reading.	1. Supplementary reading. 2. Outline map. 3. Work on project.	1. Outline map. 2. Work on project. 3. Supplementary reading.
Drill exercise from the "Evaluation Exercises" on p. 21 of this booklet.		

FOURTH DAY

Map drill and review of Japan.		
Group #1 (*Reluctant)	Group #2 (**Average)	Group #3 (***Advanced)
1. Read pp. 229-232 silently. 2. Reread pp. 229-232 orally with "Checking Up", p. 232, and discussion. 3. Work on projects.	1. Read pp. 229-232. Discuss reading and "Checking Up", p. 232. 2. Answer "Questions to Think About" #5, 6, and 7, p. 233. 3. Work on projects.	1. Work on projects. 2. Construct split-sentences (for explanation, see below). 3. Read and discuss pp. 229-232 and "Questions to Think About" #5, 6, and 7, p. 233.
Chapter summary by using the split sentences. These are true statements about the important material in the chapter. These statements should be written on separate pieces of paper and numbered. The statements are then cut in half at a convenient breaking place. Both halves are given out to the class. One student reads the first part of statement #1 and another student must complete the statement with the matching half.		

Ideas for Projects. In the following list, the wide variety of projects is keyed to appeal to your students' varied interests.

ART WORK

1. Pictures of life in China or Japan showing farmers, fishermen, factory workers, storekeepers, or others.

2. Pictures to illustrate Chinese or Japanese customs, costumes, home life, recreation, religion, and celebrations.

3. Travel posters advertising Japan as a tourist attraction.

4. Series of cartoons showing Communist influence in China.

5. Charts showing various crops, statistics of population, manufacturing, trade, and other aspects of life in China or Japan.

6. Graphs showing amounts and types of manufacturing, occupations, trade, religions and other things in China or Japan.

COLLECTIONS

1. Pictures about life in China and Japan. Mount them for display.

2. Chinese and Japanese stamps, coins, or paper money mounted for display.

3. Labels from food, clothing, or manufactured items which have come from China or Japan.

4. Current events about China or Japan.

CONSTRUCTION

1. Model of a human-powered pumping station to lift water from a river to a rice field.

2. Model of a Chinese or Japanese house.

3. Model of Mt. Fujiyama out of plaster of Paris or papier-mache.

4. Sand table exhibit of a Japanese farming village.

5. Diarama showing scenes of Chinese or Japanese life.

6. Booklet or scrapbook about some aspect of life in the moist semitropics of Asia.

OTHER PROJECT IDEAS

1. Act in your own story about life in Japan.

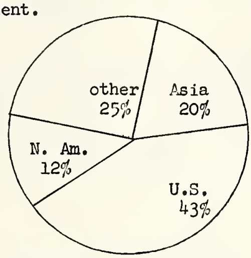
2. Look up the receipes for some typical Chinese or Japanese foods. Try cooking one of them.

3. Write a letter to a Japanese school and tell them about your study of their country.

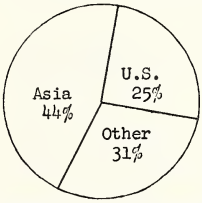
4. Demonstrate the use of chopsticks for eating.

Reading Graphs. The study of Japan furnishes an ideal situation for a look at some of the principles of world trade. Your students have already learned that Japan must import most of her raw materials. They may not know that in order to be successful, the value of Japanese exports must balance the value of her imports. Japan is seldom able to do this. Your students will know that the consequence of spending more money than one makes leads to bankruptcy.

The following circle graphs point out with whom Japan did her trading in the year 1952. Since that time, there has been little change in the trading picture. You might want to have these graphs drawn on the board or mimeographed for each student.



IMPORTS $2,000,000,000



EXPORTS $1,300,000,000

You may want to ask your students some of the following questions which require the use of graph reading skills. Asterisks indicate questions that might be asked of *reluctant, **average, and ***advanced students.

*1. What was the value of Japan's imports in 1952? ($2,000,000,000)
*2. What was the value of Japan's exports? ($1,300,000,000)
*3. How much money did Japan lose in 1952? ($2,000,000,000 minus $1,300,000,000 equals $700,000,000)
*4. Why is the "Import" circle graph larger than the "Export" circle graph? (The value of Japan's imports is greater than the value of her exports.)
*5. From whom did Japan buy most of her raw materials? (United States) What percentage? (43%)
*6. From what other place did Japan buy much raw material ? (Asia) How much? (20%)
**7. How much money did Japan spend in the United States? (43% of $2,000,000,000 equals $860,000,000.)

**8. How much money did she spend in Asia? (20% of $2,000,000,000 equals $400,000,000)
*9. To whom did Japan sell most of her manufactured products? (Asia) What percentage? (44%)
**10. How much money did Asia pay for Japan's manufactured products? (44% of $1,300,000,000 equals $572,000,000)
***11. How much profit did Japan make in Asia? ($572,000,000 minus $400,000,000 equals $172,000,000)
*12. How much of Japan's manufactured goods did the United States buy? (25%)
**13. How much money did the United States spend for Japanese goods? (25% of $1,300,000,000 equals $325,000,000)

***14. How much loss did Japan take in the United States? ($860,000,000 minus $325,000,000 equals $535,000,000 loss)

*15. What will happen if Japan continues to lose money through trade? (The country will go bankrupt and need aid from outside sources.)

You might want to explain to your students that much of the loss which Japan suffers through world trade is made up by armed forces' spending in Japan, the banking services in Tokyo, international insurance companies, tourist trade, and the Japanese merchant marine.

Constructing graphs. Perhaps some of your **average and ***advanced students would like to construct graphs like those above to indicate the products which are imported and exported. To get the size of the circles, let 1" of radius equal $1,000,000,000. Then the radius of the import circle ($2,000,000,000) will be 2" and that of the export circle ($1,300,000,000) will be approximately 1 1/3". The divisions for showing percentages are obtained by taking the various percentages of 360° and marking them off around the circle with a protractor.

The following figures provide your students with the necessary statistics for their circle graphs:

**General Imports ($2 billion)

Raw material	52% or 187°
Food	32% or 115°
Partly mfg. goods	7% or 25°
Mfg. goods	9% or 33°
TOTAL:	100% or 360°

**General Exports ($1.3 billion)

Mfg. Goods	53% or 191°
Partly mfg. goods	35% or 126°
Food	8% or 29°
Raw material	3% or 10°
Other	1% or 4°
TOTAL:	100% or 360°

***Specific Imports ($2 billion)

Raw textile material	29% or 104°
Coal & ore	9% or 33°
Food: rice, wheat barley	32% or 115°
Oil	6% or 22°
Machinery	5% or 18°
Crude Rubber	2% or 7°
Chemicals	2% or 7°
Fertilizers	2% or 7°
Others: less than 2%	13% or 47°
TOTAL:	100% or 360°

***Specific Exports ($1.3 billion)

Textiles	35% or 126°
Metal products	27% or 97°
Machinery	9% or 33°
Food: fish, fruits, tea	8% or 29°
Art & china	4% or 14°
Chemicals	3% or 11°
Others: less than 3%	14% or 50°
TOTAL:	100% or 360°

SUGGESTED ANSWERS FOR CHAPTER 11

"Checking Up", p. 225

1. The roofs of the Japanese houses often extend as much as six feet beyond the walls in order to shelter the house from the heavy rains and hot sun. The houses are built one to three feet above the ground to allow the air to circulate beneath them, thus preventing dampness. The porch is on the south side of the house to take advantage of the southerly winds which blow in summer.

2. Japanese farmers often prefer to own several scattered plots because they can take advantage of the lowlands for rice growing, and the better drained uplands for growing tea, fruit, and mulberry trees.

3. Japan's most important lowland crops are rice, wheat, barley, and beans. The upland crops include wheat, barley, vegetables, oranges, pears, grapes, plums, peaches, persimmons, tea, and mulberry trees.

"Checking Up", p. 227

1. Japan's leading industries are textile manufacturing and the iron and steel industry. Three advantages that Japanese industry has are: good harbors for handling exports and imports, millions of skillful factory workers, and many falling streams which supply water power. The lack of minerals, coal, petroleum, and other raw materials is a drawback to industry.

2. In 1923, earthquakes and fire destroyed much of the city of Tokyo. When the city was rebuilt, it was constructed along modern lines.

3. Yokahama is a port city with a good harbor. Many industrial plants are built along the level land near the coast.

Checking Up , p. 232

1. The main advantage of Shanghai's location is the fact that it is the only city near the mouth of the Yangtze River which can be used as a seaport. The city handles an enormous amount of trade carried on by boats which follow the Yangtze River between Shanghai and the interior of China.

2. The vegetable garden and threshing floor are located close to the farmhouse so that the family can keep watch over and guard the crops.

3. The Yangtze Valley and the Si Valley are two fertile valleys in China. The Red Basin is deep in the interior of China at the place where several tributaries join the Yangtze River. It is one of the most fertile and attractive parts of China and is almost completely encircled by high mountains.

4. The growth of manufacturing has been hindered by the poor transportation system and political unrest in China. Some of the things which are manufactured in Canton and other Chinese cities include cotton textiles, flour, tobacco, egg products, and silk thread. The minerals found in China include deposits of copper, tin, tungsten, salt, and some iron ore and coal.

"Questions to Think About", p. 233

✓1. Farming in China and Japan requires a great deal of hand labor because the farmers have little money to buy machinery or animals to do the work. Animals are difficult to feed in a land where there is barely enough food for the people. Many times the fields are so small that machinery or animals would be of little use. Usually, the fields are so scattered that it would be impractical to use large farm machinery.

2. The Pacific side of the Japanese Islands contains level land and the best harbors and rivers which have been harnessed to develop hydroelectricity. The industrial belt is located along the Pacific side, and millions of people work in the factories.

3.✓X Some Japanese farmers plant wheat or barley in a field and grow vegetables between the rows of grain. As soon as the grain is cut the farmer plants more vegetables in the rows he has just harvested. Thus, a Japanese farmer is able to raise three crops a year on the same field.

4. Japanese manufacturing suffers from a lack of minerals, coal, petroleum, and other raw materials. Drawbacks to Chinese industry are the widely scattered mineral deposits, lack of transportation, and political unrest.

X5. The houses in China usually have white plaster walls, colorful tiled roofs, and black lacquered doors and woodwork. They are built around a courtyard. In Japan, the houses are usually made of wood with thatched roofs, steeply sloped and overhanging. Houses stand from one to three feet above the ground. The south wall usually has sliding panels which enable the family to take advantage of the warm winds of summer. The farmers of Japan and China raise almost identical crops: rice, wheat, barley, vegetables, tea, fruit, and mulberry trees.

6. The main difference between rice-growing in Japan and rice-growing in China is that the Chinese farmer can frequently grow two rice crops in the same year, while in Japan only one rice crop can be raised in a year.

7. Chinese farmers are usually a little better off than Japanese farmers because a Chinese family frequently has a pig or two and a few chickens and ducks. These animals provide meat for special occasions.

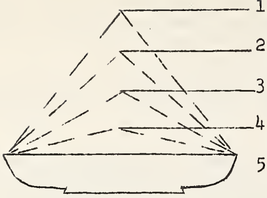
"We and They", p. 233

These questions require your students to observe and think about your local community in relation to China and Japan.

EVALUATION EXERCISES

To Check on Your Students' Understanding of Factual Information

Directions: How much rice can you eat? Start with question number one and try to eat the whole bowl by answering each question correctly.



1. What city is located at the mouth of the Si River? (Canton)
2. How much of the Japanese Islands can be used for farmland? (1/5)
3. For what are mulberry leaves used? (To feed the silkworms)
4. Why are Japanese houses built off the ground? (To protect them from dampness)
5. Name the largest city in Japan. (Tokyo)

To See Whether Your Students Can Find Some Specific Examples of Some General Statements

Directions: The following sentences are true general statements about places and things in the world. Can you give a specific example of each statement, relating it to the moist semitropical region of Asia?

1. Cities are important when they are located at the mouths of rivers used for transportation.	(Ans. Shanghai or Canton)
2. Many important manufacturing cities have separate seaports.	(Ans. Yokahama is the port for Tokyo.)
3. Skillful farmers grow crops that are suited to the climate, soil, and topography.	(Ans. Tea, mulberry trees, rice)
4. People prefer to live on level land in mild climates.	(Ans. The Yangtze Valley, Si Valley, Pacific Coast of Japan)
5. Manufacturing depends on transportation.	(Ans. China's industry has not developed rapidly despite natural resources because of poor transportation.)

To Check on Your Students' Knowledge of Important Places

Directions: Unscramble each set of letters, making a place name out of each set. Use each place name in a descriptive sentence.

1.	is	(Si)	The Si River is in the southern part of China.
2.	koyot	(Tokyo)	Tokyo is the capital and largest city in Japan.
3.	zanygte	(Yangtze)	The Yangtze River is an important transportation line in China.
4.	gnokgnoh	(Hongkong)	Hongkong is located near the mouth of the Si River.
5.	nughcgnik	(Chungking)	The leading city in the Red Basin is Chungking.

To Measure Your Students' Understanding About Manufacturing in Japan.

Directions: In the following list, place a circle before those things which have helped the growth of industry in Japan. Place an x before those things which have hindered the growth of industry. Leave all other items blank.

o hydroelectric power
plenty of coal
o location near ocean
x little oil
rich iron ore

few people
poor harbors
x few raw materials
long rivers
x poor mineral resources

o many workers
volcanoes
much gold
poor transportation
plenty of cotton

STUDENT READING LIST FOR CHAPTER 11

NON-FICTION

**Edelman, L., Japan in Story and Pictures, Harcourt, 1953. A letter from Japan and pictures from this island land present a realistic drama of life there today.

*Mears, H., The First Book of Japan, Watts, 1953. Life, customs, sports, farming, silk industry, and other types of work are discussed.

**Spencer, C. (Yaukey, C.), The Land of the Chinese People, Lippincott, 1951. China is contrasted as a land of people in the "Brown North" and the "Green South". Chapters of this book deal with an air view of China and a discussion on how the Chinese people live.

**Vaughan, J., Land and People of Japan, Lippincott, 1952. The problem of too many people on too little land is a tremendous one for the Japanese people.

FICTION

*Buck, P., The Big Wave, Day, 1948. How will Jiya be affected as the sole survivor of a tidal wave which destroyed the Japanese fishing village where he lived?

**Crockett, L., Teru, Holt, 1950. The arrival of the Americans in Yokohama after V-J Day created an occasion that was both fearful and exciting to Teru.

**Lewis, E., Ho-Ming, Girl of New China, Winston, 1934. Ho-Ming gave up much to learn to read and aid an American woman doctor in a struggle against disease and superstition.

**Lewis, E., Young Fu of the Upper Yangtze, Winston, 1932. Young Fu discovers mystery, bandits, and treachery when he goes to live with his widowed mother in the city of Chungking.

*Rowland, F., Jade Dragons, Oxford, 1954. Wong Ting had always wanted one thing: to walk on land. He finds that his boat is valuable in a search for a jade dragon.

*Treffinger, C., Li Lun, Lad of Courage, Abingdon, 1947. Li Lun is given the strange punishment of growing rice on a mountain top after his fear gets the best of him and he refuses to go to sea with the other fishermen.

*Urbahns, E., Little Red Dragon, Dutton, 1947. Chang is proud of being the adopted son of a rich Chinese potter, but an unexpected turn of events makes him a fugitive trying desperately to escape the officers.

*Wood, E., Great Sweeping Day, Longmans, 1936. House cleaning is a dreaded chore even to a Japanese boy. To run away may lead to adventure and suspense.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 11

Agriculture and Fishing in Japan, 1945 (mp, b&w, sound, 27 min, #65). Illustrates primitive methods of cultivation and harvesting of rice, tea, barley, and other crops in Japan, as well as inland and ocean fishing industry.

China, 1951 (fs, b&w, 30 fr, #69). A family's three-and-a-half acre farm near the city of Shanghai.

China, The Land and the People, 1955 (mp, color, sound, 12 min, #20). Stresses characteristics and differences between north and south China. Also agriculture and shift toward industrialization.

Farming in South China (Si River Valley), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). The Szechwan Basin of south China is seen as a densely populated country where farmland is scarce and intensive type of agriculture is carried on.

Island Nation (Japan), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Living is difficult where farmland and other resources are limited. But by hard work and industrial development, densely populated countries can overcome some of their difficulties.

Japan, 1953 (set of 6 fs, color, 25 fr, #21). "Food for Japan's Millions", "Japan, Land of Contrast , "Japanese Fishermen", "Japanese People and Traditions", Rice, Basic Crop of the East .

Japanese Family, 1950 (mp, b&w, sound, 23 min, #45). A visit to a silk weaver in Kyoto, a glimpse into Japanese family life.

Japanese Fishing Village, 1953 (mp, b&w, sound, 13 min, #69). A typical day and the way of life in a small Japanese fishing village.

Japan, The Land and Its People, 1951 (fs, color, 43 fr, #58). Portrays the economic, social, and political aspects of Japan in its role as an important Asiatic power.

Modern Japan, 1955 (set of 9 fs, b&w, #24). "Topography and General View of Japan", "Children of Japan", "Rural Japan", "Agriculture in Japan", "Industry in Japan", "Commercial Fishing in Japan", "Transportation in Japan", "Religions in Japan", "Japan as a Vacation Land".

Oriental City (Canton, China), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Shows the life of the people living in a sampan as well as the life of Cantonese merchants.

Rice Farming In Japan, 1953 (mp, color, sound, 12 min, #63). The process of rice planting, cultivating, harvesting, and cooking are shown in detail.

Town By The Yangtze, 1950 (mp, color, sound, 10 min, #4). Portrayal of a typical small agricultural town on the Yangtze delta.

FEATURE: CATTLE LANDS OF SOUTH AMERICA (pp. 233-235)

In South America, the moist semitropical area is found along the southeastern coast. Starting south of the coffee growing district, the region takes in parts of Brazil, Paraguay, and Argentina as well as all of Uruguay.

Your students will see how the people have adapted to their natural environment by raising cattle. There is some farming, but big estancias in Uruguay and on the Pampas of Argentina raise cattle for shipment to other parts of the world, especially Europe. Montevideo in Uruguay and Buenos Aires in Argentina contain many slaughterhouses where the meat is processed for shipment.

FOR YOUR OWN READING

For further information concerning the moist semitropics of South America you may want to examine the following book.

Preston James, Latin America, Ch. 9, "Paraguay", Ch. 10, "Argentina" (The Humid Pampa), Ch. 11, Uruguay", Ch. 16, "Brazil" (The South).

PRIMARY OBJECTIVE		MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	→	What types of activities enable the people to make a living in the moist semitropical lands of South America?

ACTIVITIES

Southern Brazil: Long-horn cattle, vegetables, rice, citrus fruits, and cotton	Uruguay: Rich grasslands, plenty of water, high-grade cattle Trading center: Montevideo
Southeastern Paraguay: The distance to markets forces people to raise things for their own needs	Argentina: Rich grasslands (Pampas) Large cattle ranches Trading and export center: Buenos Aires

SUGGESTIONS FOR TEACHING

In planning your classroom reading assignments, you may want to continue to use reading groups as previously suggested. Words which you will want to stress include: Paraná pines, yerba maté, estancias, Durham cattle, Hereford cattle, Pampa, and Gauchos. The "Checking Up" exercise on p. 235 can be used to furnish helpful guide questions for your reading groups. Many of the projects which were listed on p. 18 of this booklet can be adapted for use with this feature.

SUGGESTED ANSWERS FOR FEATURE (pp. 233-235)

"Checking Up", p. 235

1. Southern Brazil is called a pioneer land because few people have settled there. Settlers have come from Germany, Italy, Poland, and Japan.

2. There are many large ranches in Uruguay because tall prairie grass covers the rolling plains. The evenly distributed rainfall keeps the grass green all year. There are plenty of streams to furnish drinking water for livestock.

3. Buenos Aires is a trading center and sea port for the livestock industry. Slaughterhouses prepare beef and mutton for shipment. Refrigerator ships carry the meat from Buenos Aires to many parts of the world.

4. Alfalfa is used to feed the cattle. Tenant farmers are allowed to use a section of land for four or five years to grow wheat. In return, the tenant farmer must plant alfalfa when he leaves. This one planting of alfalfa keeps the cattleman supplied for five years. When the alfalfa is used up, the cattleman allows another tenant to use the land for another five years, and the process is repeated.

STUDENT READING LIST FOR FEATURE (p.233-235)

NON-FICTION

**Melbo, I., Miedema, M., & Carlson, S., Young Neighbors in South America, Silver. Some young North Americans find that visiting ranches in Argentina and Uruguay, listening to gaucho stories, making new friends, and finding an uncle make a pleasant vacation.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 233-235)

Argentina, 1951 (fs, b&w, 60 fr, #23). Portrays Buenos Aires as the hub of Argentina's commercial, industrial, and agricultural activity. The pampas are shown as the source of agricultural wealth.

Paraguay, 1945 (mp, b&w, sound, 17 min, #65). People and activities of this small South American country.

Uruguay, 1943 (mp, b&w, sound, 17 min, #65). Compares the agriculture, economic well-being,and the life of the people with activities in the United States.

Vacation On The Pampas, 1951 (fs, color, 40 fr, #69). Art work presents a story of daily life of a boy on vacation in Argentina.

Horsemen Of The Pampas (Argentina), 1948 (mp, b&w, sound, 20 min, #65) and 1954 (fs, b&w, 45 fr, #65). A visit to a large cattle ranch showing the daily work of the gauchos, cattle shipment, and home life of the working people and large land owners.

FEATURE: A GARDEN SPOT OF THE WORLD (pp. 236-237)

The southeastern tip of Africa contains a moist semitropical region which is truly the garden spot of South Africa. Attracted by beautiful gardens, golf courses, bathing beaches, and fishing spots, many people of South Africa vacation in Durban, the chief city.

Crops raised in this section of Africa are similar to crops raised in our Southland. As in other parts of South Africa, there is a mixture of people. A large part of the area is set aside for the native Zulus who, like the Masai, herd cattle. The Afrikaners, descendants of Dutch settlers, as well as British settlers live in the cities and towns or on the large plantations. Hindus, who are descendants of imported sugar cane workers, work at market gardening and in the retail trade.

PRIMARY OBJECTIVE	MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	What groups of people live in the moist semitropical lands of Africa and what products do they produce?

People	Crops	
Zulus: natives, herd cattle	Sugar cane	Citrus fruit
Afrikaners:) live in cities or on large	Tobacco	Cotton
British:) plantations		
Hindus: market gardening	Durban:	Chief city and port

SUGGESTIONS FOR TEACHING

When your students have answered the "Checking Up" questions on p. 237, they will then have a basis for answering the Major Question suggested for this feature. Zulus, Masai, Hindus, kraals, and Mozambique are words which you may have to reemphasize with your class. Some of your students may want to do projects, supplementary reading, or map work in connection with this feature.

SUGGESTED ANSWERS FOR FEATURE (pp. 236-237)

"Checking Up", p. 237

1. The population of semi-tropical South Africa is made up of Zulus, Hindus, and Dutch and English settlers.

2. Sugar cane, tobacco, citrus fruits, and cotton are the leading crops in the area. Cotton, one of the newest crops, is being raised on large plantations.

3. Durban has many attractions for vacationers. There are beautiful gardens, picturesque scenery, golf courses, bathing beaches, and good places to fish.

STUDENT READING LIST FOR FEATURE (pp. 236-237)

NON-FICTION

**Harris, L., and Harris, W., It Happened In South Africa, McKnight. An American family on their visit to Zululand run into unexpected adventure in the moist semi-tropics of south Africa.

FICTION

*Mirksy, R., Seven Grandmothers, Wilcox, 1955. Nomusa must decide whether to become a Zulu witch doctor or a nurse.

*Mirsky, R., Thirty-One Brothers and Sisters, Wilcox, 1953. Nomusa's father, a Zulu chief, rewards her for her bravery in encountering a wild boar.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 236-237)

Delightful Durban, 1954, (mp, b&w, sound, 16 min, #29). Scenes in the port of Durban show business centers, factory areas, Indian and native markets, and residential areas.

Land Of The Swazis, 1952 (mp, b&w, sound, 18 min, #29). Shows how modern technical methods can help a backward people contribute to world commerce.

FEATURE: A LAND FOR PLEASANT LIVING (pp. 237-239)

As your students have learned, parts of Australia are hot and dry. However, in the southeast along the coastal plain, the natural environment is more favorable. Here, a moist semitropical section presents a striking contrast to much of the continent. Most of Australia's population lives in this section. Sydney, the industrial and manufacturing city, and Brisbane, the vacation spot, are located in this area.

MAJOR QUESTION

You will probably want your students to investigate the reasons why most of the people in Australia live in the moist semitropical region.

PRIMARY OBJECTIVE		MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	→	Why are the leading cities of Australia located in the moist semitropical region?

Reasons

Sydney: Industrial city Good natural harbor Near coal fields Near farming section Near forests	Brisbane: Resort city Shady beaches Rolling surf Forests and mountains	Grafton & Lismore: In dairying region

SUGGESTIONS FOR TEACHING

You might introduce the moist semitropics of Australia by displaying a population map. The World Population Map on pp. 416-417 will serve the purpose. Your students will be able to see that most of the population of Australia is concentrated along the southeastern coast. "Wny?" The reading material on pp. 237-239 will help to answer the question. The "Checking Up" questions on p. 239 point up important points in the reading. If you want to have your students make a map of the moist semitropics of Australia, the map on p. 238 can serve as a guide.

SUGGESTED ANSWERS FOR FEATURE (pp. 237-239)

"Checking Up", p. 239

1. Sydney has a fine harbor and is located near the coal fields at Newcastle. A belt of dairies and orchards encircle Sydney. West of Sydney, farmers grow fine corn and vegetables.

2. Brisbane is a resort city because it has miles of sandy beaches, water for surf boarding, bathing, and sailing as well as forests and mountains which attract hikers and mountain climbers.

3. Australians hold their May Day festival in November because the best part of their spring season comes around that time.

4. Since Australia is south of the equator, the seasons are opposite of those in the Northern Hemisphere. Christmas is celebrated with picnics and swimming because it arrives in midsummer.

STUDENT READING LIST FOR FEATURE (pp. 237-239)

NON-FICTION

**Bluden, G., Land and People of Australia, Lippincott, 1954. Sections of this book discuss the life of the people--rural and urban--along the east coast of Australia.

**Harris, L., & Harris, W., It Happened In Australia, McKnight. An American family visits the beautiful city of Sydney and also some of the farms and industries of eastern Australia.

FICTION

***Norway, N. (Shute, N.), Far Country, Morrow, 1952. A refugee lumberman calls on his dormant skills as a doctor to save the lives of two men in the forests of southeastern Australia.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 237,239)

Pacific Terminal, 1947, (mp, b&w, sound, 10 min, #8). A travelog of Sydney, capital of the state of New South Wales, Australia.

A Pint Of Milk, 1949, (mp, b&w, sound, 10 min, #8). Describes the dairy industry in Australia.

Sheep Ranching Country (Southeastern Australia), 1949 (mp, b&w, sound, 20 min, #65) and 1955, (fs, b&w, 45 fr, #65). A contrast between living on a sheep ranch and living along the seaboard of eastern Australia.

REVIEWING UNIT FIVE

PLANNING THE REVIEW

As you review this unit with your class, you will find "Reviewing Unit Five" on pp. 239-240 helpful in summarizing the important points. You might like to use the Major Questions given in this booklet as well as the "Question to Think About" on p. 240. The "Broader View on pp. 239-240 re-focuses your students' attention on the importance of conservation. Some ideas for projects are included in "Your Geography Workshop" on p. 240 as well as on pp. 18-19 of this booklet.

ADDING UP IDEAS

Some of the factual information that you will probably want your students to remember about the moist semitropical regions is listed below.

1. The moist semitropical climate is found on the east side of continents usually between 25° and 40°, north and south of the equator.

2. Summers in moist semitropical lands are long, hot,and humid. During at least four midsummer months, these lands resemble the rainforest regions in their heat and high humidity.

3. The winters are mild with occasional, short cold spells when frost may be expected.

4. Rainfall is well distributed throughout the year although spring and early summer have more rainfall than the autumn and winter seasons.

5. Warm ocean currents flow along the eastern coasts of the moist semitropics. Easterly winds blowing over these warm waters often bring rain.

6. In the Northern Hemisphere, the moist semitropics suffer from frequent visits of destructive hurricanes or typhoons.

7. In those moist semitropical areas where coal and minerals are available, manufacturing is becoming important.

8. In all of the moist semitropics, large port cities have developed. These cities are very important to the rest of the world. Some of these port cities are: New Orleans, U.S.A.; Buenos Aires, Argentina; Shanghai, China; Yokohama, Japan; and Sydney, Australia.

9. The moist semitropical areas have attracted many different peoples. All of the areas, except Australia and China, have the problems of peoples who must learn how to live together even though they have different customs, different standards of living, and in some cases different religions.

Suggested Answers for "Questions to Think About," p. 240

The moist semitropical lands which you would most likely think of are as follows:

1.

Statement	Moist Semitropical Area
"Wear cotton clothing"	Our Southland
"Eat a bowl of rice"	Japan or China
"Pass a dairy farm"	Australia
"Broil a steak"	Argentina or Uruguay
"Fill a sugar bowl"	South Africa
"Buy a silk dress"	China or Japan

2. Agriculture will probably continue to be the main work activity in the moist semitropics because the long, hot, rainy summers and the mild, rainy winters make it possible to raise at least two crops a year. Most of these lands have large areas of fairly level land with good soil.

3. Manufacturing is more highly developed in our Southland because there are accessible supplies of coal, oil, iron ore, and other minerals. Many industries have moved there to take advantage of the cheap hydroelectric power, the inexpensive land, low taxes, nearness to raw materials, and plentiful labor supply.

EVALUATING THE UNIT

In your evaluation, you will want to measure how far your class has gone in acquiring the skills, factual information, and attitudes needed to answer the Major Questions and other questions about the chapters, and how much progress has been made in reaching the Primary Objectives.

There are many ways to plan your evaluation for the unit. You might wish to construct tests based on the reading material as well as the pictures and maps in the various chapters in the textbook. You might also wish to select for your method of evaluation some of the suggestions, Major Questions, or Evaluation Exercises in this booklet.

See also Unit Test Five in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

UNIT SIX: GREEN AND BUSY LANDS

BOOKLET #8
Your Own Look Ahead. 1
Ch. 12: Our Booming Pacific Northwest . 2
Ch. 13: The Busy Lands of Western Europe 12
Feature: A Rising Land of Pioneers. . . 21
Feature: Where Nature Welcomes Man. . . 23
Reviewing Unit Six 24

YOUR OWN LOOK AHEAD INTO UNIT SIX

The parts of the earth which we call western marine lands bear a most fitting name. Most of the lands are located on the western sides of continents, and the oceans which border them affect nearly everything and everybody. The oceanic influence makes winter temperatures warmer and summer temperatures cooler than might be expected. Winters in southern Alaska, for example, are warmer than those one thousand miles farther south in Washington, D.C. Europe is about 10° warmer in the winter than it would be if the Atlantic Ocean did not bound its western coast. The warm North Atlantic Drift makes comfortable living possible north of the Arctic Circle in Norway. Considering the distances of western marine lands from the equator, these lands have the mildest seasons in the world.

Four of the Primary Objectives listed in Booklet 1 are stressed in this unit. The following chart diagrams the Major Questions pertaining to the chapters and features in this unit. The relationship between the Primary Objectives and Major Questions is also pointed out.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings. Generalization: The people of western marine areas have adjusted to their natural environment by engaging in a variety of activities.	Chapter 12, Question #1 How are work activities in the Pacific Northwest related to the natural environment?
Objective: To teach the value of natural resources and the need for making better use of them through conservation. Generalization: For many years, the valuable resources of western marine countries were carelessly used. Today, conservation is necessary to protect and insure supplies of many natural resources.	Chapter 12, Question #2 How is conservation being practiced in the lumbering and salmon industries?
Objective: To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. Generalization: People who live in marine climates earn their living in a wide variety of ways.	Chapter 13, Question #1 Why are there many different occupations in marine Europe? Feature (pp. 271-274) Question Why do more people live in northern marine Chile than in the other two sections? Feature (pp. 274-277) Question What activities are favored by the marine climate of New Zealand?
Objective: To promote peace by emphasizing the interdependence of all people in the world and the problems of these people. Generalization: The people who live in marine climates exchange goods with the rest of the world.	Chapter 13, Question #2 What are the important ports of marine Europe and what products are exchanged with the rest of the world?

AROUSING INTEREST IN THE UNIT

The pictorial introduction on pp. 28-29 contains a number of pictures which show life in the marine countries of Western Europe. Your class might begin the unit by observing and discussing these pictures. You might have your students make a list of all the different occupations they see pictured. The occupations include: farming, railroading, sheep raising, mining, ocean shipping, and manufacturing.

Next, the class might turn to the title of the unit, "Green and Busy Lands" on p. 241. You might want to ask, "How do the pictures on pp. 26-29 show that this is a busy land?" "What makes you think that these are also green lands?" Your class will find plenty of green landscape in the colored picture on p. 26. The picture caption tells them that this is a picture of the British countryside. You could have someone locate Great Britain on the wall map. Why do you think the British landscape is so green?" This question should bring out the point that Great Britain is an island, and that its climate is influenced by the ocean. Suggest that the students look again at the pictures on pp. 28-29 to see how frequently boats and shipping are shown.

You might have your students recall the experiment involving the use of a can of sand and a can of water, which was explained on p. 16 of Booklet 4. This experiment was used to demonstrate that water bodies influence the temperatures of nearby land areas. In lands adjacent to water bodies, the temperature range is small. Because of this, winters are comparatively warm and summers are cool.

Temperatures in lands adjacent to water bodies are also affected by ocean currents. To illustrate this, have a student locate the St. Lawrence River in Canada and the port of Bergen, Norway. Frequently during the winter, the St. Lawrence River is frozen while the port of Bergen, Norway, is ice-free all year. You might ask your students, "How is this possible since Bergen is so much farther from the equator?" You might also point out the fact that the British Isles are the same distance from the equator as Newfoundland. Yet, the British Isles have a very dense population while the population of Newfoundland is sparse partly because the climate is too cold. Since each of these locations is near an ocean, your students will see that nearness to large water bodies is not the only factor influencing climate.

Perhaps one of your students will observe that the North Atlantic Drift, which is a continuation of the warm Gulf Stream, flows past most of the lands of Western Europe. You can help the class to deduce that this is the reason for the mild winters in places so far from the equator.

Your class can read the unit introduction on pp. 241-242 to verify points brought out in their discussion and to find out more about the climate of western marine lands. They can use the "Climate Facts" for Paris, France, on p. 242, for comparison with climatic statistics of their local community.

CHAPTER 12: OUR BOOMING PACIFIC NORTHWEST

YOUR OWN LOOK AHEAD INTO CHAPTER 12

Conservation is necessary if the peoples of the world want to protect their valuable natural resources. Chapter 12 gives you an opportunity to emphasize very strongly the need for and the advantages of conservation. You can point out to your class how most of the big lumbering companies in the Pacific Northwest consider trees much as farmers do their crops. You can also show how ghost lumbering towns and acres of fire-blackened stumps mark areas where forest conservation practices were ignored. The story of the salmon industry in the Northwest furnishes another example of how people are learning the value of the wise use of natural resources.

Chapter 12 has several divisions to aid your students in their reading.

1. "Let's Look at Maps", pp. 244-245.

2. "Forests, an Ever-Growing Resource", pp. 246-247, describes the stands of giant redwood and Douglas fir in the Northwest.

3. "Life in the Logging Country", pp. 247-250, describes the life of the lumbermen, methods of cutting timber, and proper conservation practices.

4. "The Rich Valleys and Lowlands", pp. 250-252, explains how farming in the Willamette Valley and dairying around Puget Sound are related to the natural environment.

5. "A Thousand Miles of Fisheries", pp. 252-254, describes the life cycle of the salmon and tells how the fishing industry was threatened until conservation measures were adopted.

6. "Centers of Trade and Industry", pp. 254-256, discusses manufacturing and trade in Portland, Seattle, and Vancouver.

FOR YOUR OWN READING

The following books may enrich your background about the Pacific Northwest.

C. Langdon White, and E. J. Foscue, Regional Geography of Anglo-America, Ch. 15, "The North Pacific Coast".
J. Russel Smith and M. O. Phillips, North America, Ch. 34, "The Puget-Sound-Willamette Valley . Ch. 35, "The North Pacific Coast, and "The Southwestern Alaskan Grasslands".
Otis W. Freeman and H. H. Martin, The Pacific Northwest.

MAJOR QUESTIONS

Several Major Questions are included for your use with Chapter 12. They point out the concepts of interrelationship between man and his natural environment and the value of conserving natural resources. Information which answers the Major Questions is summarized in chart form.

PRIMARY OBJECTIVE		MAJOR QUESTION #1
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his surroundings.	→	How are work activities in the Pacific Northwest related to the natural environment?

Activities Related To Environment

Fruit and Berry Farming 1. Fertile, well-drained soil 2. Cool temperature during the growing season 3. Plenty of moisture 4. Foggy atmosphere	Dairy Farming 1. Enough rainfall to grow good pastures 2. Dry enough to grow wheat, oats, and corn to give cows a balanced diet 3. Farms are small because land is hard to clear
Truck Farming 1. Fertile, well-drained soil 2. Climate encourages growth of leafy vegetables and root crops	Fishing 1. Natural breeding ground of salmon 2. Near Pacific Ocean
Forests and Lumbering 1. Mild temperatures 2. Heavy rainfall 3. Moist air	Trade and Industry 1. Natural harbors 2. Near source of timber and electricity 3. Ideal location for trade with Asia and Alaska

PRIMARY OBJECTIVE		MAJOR QUESTION #2
To teach the value of natural resources and the need for making better use of them through conservation	→	How is conservation being practiced in the lumbering and salmon industries?

Lumbering	Salmon
Conservation methods: 1. Selective cutting -- mature trees only. Small trees are left standing to grow larger. 2. Cutting of certain areas rather than all the forests allows the trees to reseed themselves. 3. Planting of young trees to take the place of those which are cut. New trees will grow to maturity in about sixty years.	Conservation methods: 1. Fish ladders and elevators have been built to enable the fish to bypass the dams on the rivers as the fish swim upstream to their natural breeding grounds. 2. Many of the spawning fish are trapped and taken to hatcheries where the young are raised. The young fish are then turned loose to make their way to the Pacific Ocean.
Reason: To insure a steady supply of lumber for the United States in future years.	Reason: To provide a dependable supply of salmon for the people of our country in years to come.

SUGGESTIONS FOR TEACHING

This chapter is divided into five short reading selections in addition to a map study. Information which answers the Major Questions is found in each selection. You might want to try some of the suggestions given with this chapter in your daily lesson plans. Any previous ideas which worked well with your class may be adapted for use with Chapter 12.

Arousing Interest in the Chapter

1. A great deal of material about forests, trees, and forest conservation can be secured from the United States Forest Service, Washington 25, D. C. You might find some of this material helpful in arousing your students' interest in this chapter.

One chart that is available is entitled "What We Get from Trees". This chart makes a good display item for the bulletin board. Your students could also prepare their own charts, listing things which are made from trees. Their lists will probably be quite long. Several students could read their lists orally. The class may be surprised to learn that all of the articles listed below come from trees.

Rayon yarns
Rayon fabrics
Cellophane
Explosives
Photo films
Celluloid
Shatterproof glass
Sponges (synthetic)
Imitation leather
Artificial hair
Airplane dope
Moulded plastics
Phonograph records
Fly paper
Crayons
Soaps
Wood flour
Industrial alcohol
Stock feeding-yeast
Bedding for animals
Ceramic tile
Insulation
Pipes for Smoking
Oils
Drugs
Incense
Adhesives
Perfumes
Flavoring extracts
Printing ink
Insecticides
Chewing gum

After several of your students' lists have been heard, you might want to say that about 4,500 different things are made from trees. Our great forests have always been one of the most important natural resources of the country. Today, less than 20% of the original forest area remains. Over 175 million trees are cut from our forests every year. This amount is four times more than the number of trees replanted.

"Where is one of the leading lumbering sections of the United States?" What are some things that can be done to conserve our forests? Both of these make good questinns to start a class discussion about the area which your students will be studying.

2. An exhibit of different kinds of wood, matched with pictures of the trees that furnish these woods, will stimulate some of your students to think and talk about our gifts from the forest. They will be able to talk about radio programs, movies, and television shows that have been made about lumbermen, forests, and forest conservation.

3. Most sutdents are interested in fish and fishing. A film or story explaining the life cycle of the salmon is both interesting and useful in developing an understanding of the need for conservation of this natural resource. The Student Reading List for Chapter 12 on p. 10 and the Selected Audio-Visual Aids for Chapter 12 on p. 11 of this booklet contain many books and films suitable for use with your class.

4. A field trip to a forest reserve, forest ranger station, sawmill, pulpmill, or lumberyard make an effective introduction to this chapter.

Let's Look at Maps (pp. 244-245). After reading the unit introduction on pp. 243-244 your class will need to be guided in their map study on pp. 244-245. Several new map skills are introduced and many previously learned skills are reviewed.

Map Skills

Skills	Review	New
Direction	N,S,E,W,NW Latitude	
Distance	Scale--recognition of differences	Scale--use of scale to measure distance
Location	Latitude, states, provinces, cities, rivers	
Symbols	International boundaries, state boundaries, coastline, ocean, province, mountains, rivers, river course, mountain ranges, cities, dams, valleys, lowlands	Mountain peaks, sound
Legend	Shading to indicate rainfall and population density (relative differences)	Hatching to indicate western marine regions
Comparison & Inference	Two maps compared in terms of population density and cities	

Suggested Answers for Map Study

1. The marine lands in North America extend from about 40°N to about 60°N latitude. California, Oregon, and Washington in the United States as well as British Columbia in Canada contain marine regions.

2. By following the directions, your students will be guided in measuring the width of the marine lands and locating some of the mountain ranges and peaks.

3. Vancouver, Canada, is located near the mouth of the Fraser River.

4. Seattle and Tacoma, Washington, are located on Puget Sound.

5. The directions for this activity require your students to examine the rainfall map.

6. The area around Puget Sound is the most densely populated region. Seattle and Tacoma are located in the most densely populated regions.

Using a Filmstrip With the Reading on pp. 246-250. After your students have read the material in the textbook on pp. 246-250 and have answered the "Checking Up" questions on pp. 247 and 250, they will be ready to study a filmstrip. A filmstrip is a continuous strip of 35 mm film containing from 10 to 100 pictures. It may come in black and white, in natural color, or in color tints. It is projected on the screen by a small filmstrip projector or by a slide projector with a special attachment. Showing a filmstrip requires a minimum of mechanical ability. You can learn to operate a filmstrip projector in less than ten minutes.

The cost of a filmstrip is small when compared to the cost of sound films and slides. Some filmstrip materials can be rented; others can be obtained merely by paying the postage; and still others are given to schools without charge. Some suitable filmstrips for this chapter are described in the Selected Audio-Visual Aids on p. 11 of this booklet. You should order your filmstrip well in advance of the date you wish to use it to make sure it arrives in time for your preview and lesson.

In the lesson outline below, the filmstrip is used as a means of gathering additional information about lumbering and conservation in the Pacific Northwest. However, filmstrips can also be used for introductory lessons, for teaching new material, and for review. The audio-visual lesson should enrich the textbook material and present additional information.

One of the filmstrips which illustrates the textbook material and adds additional information about lumbering is "The Lumber States (U.S.A.--Pacific Northwest)". This filmstrip is described in the Selected Audio-Visual Aids on p. 11 of this booklet.

After you have selected a filmstrip that seems to meet the requirements of your lesson, you will find it helpful to preview the filmstrip before using it with your class. As you watch the filmstrip, formulate a list of questions and note the things which the class should observe very carefully. (The questions can later be written on the board.) The following questions may serve for an audio-visual lesson based on the filmstrip mentioned above.

*1. What section of the United States does this film consider the lumber states? Name the states.

*2. What occupations, besides lumbering, do these people follow?

**3. Why did the two boys visit the lumber camp?

*4. What forest conservation methods are illustrated in this film?

*5. How do the forest rangers spot a forest fire?

***6. How do the forest rangers know exactly where a fire is located?

*7. What are some of the methods used to combat fires?

*8. How are logs transported to sawmills?

**9. How is plywood made?

*10. What is the meaning of each of the following words: seedling, block, topper, spar-tree, sawyer, pulp, and feller?

Just before showing the filmstrip, you might explain to your students that they are going to see some additional pictures about lumbering. As they look at the pictures and read the script beneath each picture, your students should look for methods that logging companies use to conserve forests. They should also look for answers to the specific questions which you have prepared and written on the board. A student can read these questions orally, and the class can note their answers on a piece of paper as the information appears on the screen.

Students might take turns in reading the scripts accompanying the pictures in the filmstrip. Discussion can be carried on about any picture while it is on the screen and various details can be pointed out to your class. The list of prepared questions and your students' answers can be discussed after the showing.

Often it is advisable to show a filmstrip twice in order to check on your students' understanding of the material. In the second showing, you might adjust the picture on the screen so that the script is not visible. This can be done by adjusting the framing device on some projectors or by holding a filing card in front of the lens to block out the reading material. You can then have your students review the main idea of each picture without the help of the script.

Reading to Verify Answers to Problems (pp. 250-256). Reading to verify answers to problems may add variety to your class lesson. The problems selected can be real or fictional. Your students will probably be most interested if the problems affect them directly. However, it is also desirable to have your students think sympathetically about other people's problems.

You may want to use the problem approach with the following sections of the chapter: "The Rich Valleys and Lowlands" on pp. 250-252; "A Thousand Miles of Fisheries" on pp. 252-254; and "Centers of Trade and Industry" on pp. 254-256. The problems to be examined in each section might be written on the board. You will need to make sure that all of your students understand the problem before they look for answers by reading the text. As an example, the problem suggested here is for the section entitled "A Thousand Miles of Fisheries". You can formulate similar problems for the other sections.

Problem: For many years the people of the Pacific Northwest have been concerned with the decline in the salmon industry.

You might have your students verify the fact that problems do exist in the salmon industry by reading the first four paragraphs of "A Thousand Miles of Fisheries" on p. 252. The passages of the text which suggest these problems can be read orally.

Your class may realize that more information is needed before they can intelligently discuss the problem on the board. A list of questions about the problem can be compiled by the class. Some of their questions may resemble these:

1. Why has salmon fishing declined?
2. What effect has the problem had on the people of the Northwest? of the United States? of the world?
3. What is being done to correct the problem?
4. Is the outlook for the future any brighter?

It is often interesting to have your students try to answer their own questions before they have had the opportunity to find answers in the text. Of course, you will need to point out that their preliminary answers are only tentative. The answers might be based on the students' past experiences or they may reflect logical thinking or intelligent guessing. It makes little difference, at this time, whether or not these preliminary answers are correct. In discussing the salmon industry, your students will be better equipped to give logical preliminary answers to their own questions if they understand the life story of the salmon. Perhaps someone in your class will be able to furnish this information. If not, you will probably want your class to read the first paragraph in "An Old Threat and a New One" on p. 252.

As the tentative answers to the questions are given, they can be written on the board under the proper question. Once the preliminary answers are assembled, have your class verify as many of the answers as they can by reading pp. 253-254 in the textbook. The class will find that they are able to verify some of their answers. They will also find answers which did not occur to them before. Your students will discover, too, that many of their tentative answers cannot be verified in the text.

The proper page number can be placed beside the tentative answers which can be verified in the text. Additional answers can also be listed along with their page references. The answers that are not verified in the text provide an assignment for your ***advanced students. "Are the remaining answers important enough to be included in the class discussion, not important, or incorrect?" All incorrect answers should be eliminated. Your class may have many ideas worthy enough to be retained.

The following answers to the questions relating to the problems of the salmon industry contain a number of prebable answers. The answers which can be verified in the text are underlined and the page references are given. The other answers are not verified in the textbook but are still worthy of class research and discussion to determine their relationship or non-relationship to the main problem.

1. Why has salmon fishing declined?

   Overfishing, p. 253
   Irrigation dams, p. 253
   water pollution
   fish disease
   natural enemies

2. What effect has the problem had on the people of the Northwest? Of the United States? of the world?

   Lack of employment
   Lack of important food

3. What is being done to correct the problem ?

   Fishing laws
   Fish ladders, p. 253
   Fish hatcheries, p. 253
   Anti-pollution laws
   Fish elevators, p. 253
   Game wardens

4. Is the outlook for the future any brighter?

   Your students may find this hard to answer, but may conclude that if conservation methods are followed, the outlook should be brighter, pp. 253-254.

SUGGESTED ANSWERS FOR CHAPTER 12

Checking Up", p. 247

1. The redwood tree and the Douglas fir are the two "giants" of the Northwest forests. The mild temperatures, heavy rainfall, and moist air favor their growth. Redwood trees average 200 feet in height although some are as high as 300 feet. The Douglas fir averages between 175 to 200 feet in height. ✓

2. Redwood forests form such a dense umbrella of leaves that sunlight rarely reaches the ground. Little undergrowth is found because of the lack of sunlight. ✓

3. Five other trees that grow in the Northwest forests are spruce, hemlock, red cedar, white cedar, and balsam fir. Spruce lumber is used for small airplane propellers, skis, and other articles that need to be tough and strong. Red cedar is used for making shingles.

"Checking Up", p. 250

1. The towns built by the progressive lumber companies are thriving and give an appearance of busyness and permanence. There is a small business section and neat rows of houses for the workers. The towns which were built by wasteful companies are usually ghost towns now. The once-busy mill is in ruins. The sawdust and waste burners are rusty. Houses are closed and falling apart. The land

surrounding the town is cut-over and fire-blackened.

2. Up-to-date lumber companies use progressive methods in "farming" the forests and they think of timber as a crop. They practice selective cutting. Only mature trees are cut. The younger trees are left to gain their full growth and to reseed the forest. After an area has been cut, new trees are planted which will be ready to harvest in sixty years.

3. The "cut out and get out" method used by some lumber companies means that these companies cut all the trees in a certain area and then move on to another spot to repeat the operation. This method leads to waste and ruin.

"Checking Up", p. 252

1. Berry farming is the most important kind of farming in the Willamette Valley. Fertile, well-drained soil, cool temperatures during the growing season, and plenty of moisture all year round favor the growth of big, sweet berries. The biggest problem is harvesting the berries. Berries must be carefully picked as soon as they are ripe. The farms are small because all the farms need fruit pickers at the same time, so that hiring enough of workers is difficult and expensive.

2. The dairying industry thrives around Puget Sound. The climate is ideal for rich pastures, hay, and forage crops, but dry enough for growing wheat, oats, and corn. This gives the herds a well-rounded food supply. The farms are small because it is difficult to clear the forests from the land.

3. Land around the large cities of the Pacific Northwest is devoted to truck farming. These truck farms not only supply the cities with fresh vegetables but also produce a large surplus for freezing and canning.

"Checking Up", p. 254

1. The salmon is born and dies in clear cool mountain streams. After birth, the young salmon move downstream to the ocean where they live for two or three years. When fully grown, the salmon return to spawn in the streams or lakes where they were hatched. The salmon's return trip up the river is called a "run".

2. The salmon industry has been threatened by overfishing and the erection of large irrigation and power-generating dams. Conservation workers and engineers have helped to solve these problemms. Fish ladders and fish elevators were built to get the salmon around the Bonneville Dam. At Grand Coulee Dam, the salmon are trapped about 100 miles from the dam and hauled by truck to fish hatcheries. After the eggs hatch, the young salmon are turned loose below the dam to find their way to the ocean.

3. As a result of salmon fishing, the canning industry has built large plants in the Northwest.

"Checking Up", p. 256

1. Two forms of transportation connecting the Northwest with eastern markets and Europe are railroads and the shipping route through the Panama Canal.

2. Woodworking and food processing developed as early manufacturing industries. Some of the newer industries include the production of furniture, the wood-pulp and paper industry, shipbuilding, aluminum and steel plants, and the aircraft industry.

3. Waterpower is important to the industries of our marine region because it can be converted into cheap electrical power.

4. Certain cities of the region enjoy advantages which have made them leading cities. Portland, Oregon, is connected by good transportation lines to the rest of the United States. It is located on the great east-west waterway of the Columbia River. Seattle has both salt-water and fresh-water harbors, excellent railroad connections with the rest of the United States, and many industries. Vancouver has a good sheltered harbor, and is the western terminal for two important railroads that run across Canada. Nearly all of Canada's trade with Asia passes through Vancouver. All of these cities have good harbors and fine transportation connections with other areas.

"Questions to Think About," p. 256

1. To verify the following statements, check the items on the pages listed:

(a) Marine North America extends from about 40°N. latitude to about 60°N. latitude: map, p. 245.

(b) Mountains rule the landscape: pictures, pp. 243, 244, 251; and map, p. 245.

(c) The region is a land of forests: pictures, pp. 244, 246; and reading material, pp. 246-247.

(d) The Redwoods and the Douglas firs are giants of the forest: picture , p. 246; and reading material, pp. 246-247.

(e) The lumber industry is highly mechanized: pictures, pp. 248-249; and reading material, pp. 247-248.

2. The reasons for the following work activities in the Pacific Northwest are given.

Fruit growing: Fertile well-drained soil, cool temperatures, abundant rainfall, and foggy, cloudy weather favor the growth of fruit.

Dairying: Abundant rain and mild temperatures favor the growth of good pasturage. Summers are dry enough for growing wheat, oats, and corn, which give the herds a well-rounded feed supply.

Truck gardening: The climate helps the farmers to grow vegetables near large cities. The city people provide good market.

Food canning: There are many surplus crops in the fruit, berry, and truck farming industries which need to be canned or frozen. The salmon industry has encouraged the canning industry also.

Woodworking: In this land of forests, woodworking is a natural occupation. It allows the worker to be near the raw materials.

Paper and pulp manufacturing: The lumbering industry also furnishes logs needed to make wood pulp and paper. Paper manufacturers also want to be near their source of raw materials, cheap hydroelectric power, and a pure water supply.

Trade: Natural harbors, nearness to Asia, the opening of the Panama Canal, and good railroad connections with the rest of the nation have helped the growth of trade.

3. Good methods of lumbering benefit the entire country because they insure a steady supply of lumber in years to come. If such methods are followed, there will be little danger of running out of timber.

4. Industrial development of the Pacific Northwest was hindered for a number of years by the lack of transportation. Railroads built to link the resources of the Northwest with eastern sections of the United States and the opening of the Panama Canal stimulated manufacturing in the region. During more recent years, the availability of inexpensive electric power has lured industry to the Northwest. Industry was given a huge boost by the increased industrial activity during World War II. This area became a leading shipbuilding center, and huge aircraft factories were built.

5. People who consider trees as "crops" plant new trees when older trees are cut down and leave immature trees standing to reseed the forest. Thus, a new harvest of trees can be expected in sixty to seventy years. Salmon also are a "crop", which must be protected and cared for. Fish ladders and elevators have been installed at some dams to help the fish to swim past obstacles in order to proceed upstream to lay their eggs. At other places, the spawning salmon are caught and taken to hatcheries. Here, the young are born; when large enough, they are put back into the stream to swim to the ocean.

"Among Ourselves", p. 256

These questions are best answered by having your students make observations in your local community.

EVALUATION EXERCISES

To Measure Your Students' Understanding of the Factual Information

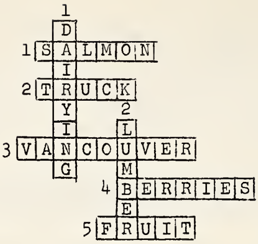
Directions: Do this exercise like a crossword puzzle.

Across:

1. Type of fish found in Northwest.
2. Type of farming found near cities.
3. Large city in marine lands of Canada.
4. Crop in Willamette Valley.
5. Crop grown on small farms.

Down:

1. Type of farming around Puget Sound.
2. Product made from trees.



To Check on Your Students' Knowledge of the Use of Forests

Directions: Place an x before each product in the following list which is made primarily from trees.

x frame house
typewriter
x canoe
steel bridge
x cellophane
x newspapers
breakfast cereal
x rayon textiles
aluminum foil
x toothpicks
x plywood
water pipes
x pencils
porcelain dishes
x baseball bat
x tennis racket
wire
bathtub
x telegraph poles
asphalt

To See Whether Your Students Know How the Salmon Industry Practices

Conservation

Directions: Fill in the proper answer in each of the blanks in the following paragraph.

The (salmon) return to small fresh-water streams to hatch their young. Their journeys are called (runs). Many times (dams) block their path. At Bonneville Dam, there is a (fish ladder) and a (fish elevator) to help the fish get past. At Grand Coulee Dam, the fish are trapped and taken to a (hatchery). These (conservation) methods are expensive, but they are helping to save the salmon industry.

To Determine Whether Your Students Remember the Important Place Names

Directions: All of these words are proper names. Tell what each name identifies.

1. Willamette (river and valley)
2. Puget (Sound)
3. Sitka (city in Alaska)
4. Rainier (mountain in Wash.)
5. Fraser (river in Canada)
6. Seattle (city in Wash.)
7. Olympic (mountain range)
8. Grand Coulee (irrigation dam)
9. Portland (city in Oregon)
10. Bonneville (irrigation dam)
11. Vancouver (city in Canada)
12. Tacoma (city in Wash.)

STUDENTS READING LIST FOR CHAPTER 12

NON-FICTION

**Aitchison, A., and Utley, M., North America by Plane and Train, Bobbs. Felling giant timber in the Northwest provides the background for a story in this book.

**Carpenter, F., Canada and Her Northern Neighbors, American. The Thunderbird introduces the Indians of British Columbia, land of forests, scenery, and salmon fishing.

**Cook, B., Stories from the West, Silver. Timber and apple orchards provide pleasant contrast in the Pacific Northwest.

***Haig-Brown, R., (Haig, R.), Return to the River, Morrow, 1941. The desperate swim up the river to the place of birth is only part of the story of the Chinook salmon.

***McKay, A., They Came to a River. Macmillan, 1941. The apple industry in the Columbia River Valley is a tale of pioneering in the 20th century.

*Morgan, D., Life In America: The West, Fideler, 1951. Lumbering and fishing in Washington and Oregon add to the economy of the West and the rest of the United States.

*Wall, G., Gifts from the Forest, Scribner, 1952. Few realize the gifts that come from lumber. The story is told pictorially in this account of present-day lumbering in America.

FICTION

*Binns, A., Sea Pup, Little, 1954. An exploration trip to Puget Sound furnishes Clint Barlow with a new and amusing pet, a baby seal.

**Haig-Brown, R., (Haig, R.,), Saltwater Summer, Morrow, 1948. A nip-and-tuck race to meet a mortgage deadline forces Don Morgan to fish all summer off the coast of British Columbia.

**Holbrook, S., Tall Timber, Macmillan, 1941. This fascinating story of the lumberjack, his history and his work, describes all the details of present-day lumbering.

***Jacobs, E., Far West Summer, Alladin, 1949. A torn ligament may be a disadvantage but it led to a delightful summer in the great Pacific Northwest.

***Lundy, J., Tidewater Valley, Winston, 1949. Could the Swiss settlers transplant their dairy industry to Oregon, where public opinion was against it?

**Lampman, E., Treasure Mountain, Doubleday, 1949. Hoxie and his sister had a special reason to look for a treasure buried since 1780.

***McGraw, E., Crown Fire, Coward-McCann, 1951. Because a quick temper lost him his job in an Oregon lumber camp, Chip Ladou determined to conquer it before it conquered him.

**Pinkerton, K., Hidden Harbor, Harcourt, 1951. The Bairds realized that Alaska offered all kinds of opportunity for people with vision and energy. They decided to make the most of it.

***Pinkerton, K., Peddler's Crew, Harcourt, 1954. Peddling goods up the coast of British Columbia brings something good to Danford Brown, a retired actor, and his two teen-age children.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 12

British Columbia (Canada Pacific Gateway), 1950, (mp, color, sound, 22 min, #34). Includes the wildlife, scenic beauty, and industrial activity with sequences on Victoria, Vancouver, and Prince Rupert Island.

Coast Lands of the Northwest, 1954 (fs, color, #58). Specializes on the way of life in the area between the Coast Ranges and the Cascades in the Willamette and Puget Sound areas.

Evergreen Empire, 1939 (mp, b&w, sound, 11 min, #60). A travelog on the state of Washington. It includes glimpses of the capital and Seattle as well as the lumbering and salmon industries.

The Lumber States (U.S.A. -- Pacific Northwest), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 49 fr, #65). An important link in the industry of our nation and its continuance is hinged on good conservation methods. Lumber has a marked influence on the people who live in the region.

Monarchs of the Forest, 1947 (mp, color, sound, 23 min, #18). The story of the lumbering industry and its problems, set in the Northwest and Canada.

Northwest Empire, 1952 (mp, color, sound, 40 min, #62). Shows the native industries of the Pacific Northwest as well as the natural scenic spots in that area.

Northwestern Holiday, 1949 (fs, color, 53 fr, #53). Pictures the beauty of Crater Lake, The Columbia River, Mt. Ranier, and other scenic spots.

Pacific Canada, 1950 (fs, b&w, 70 fr, #23). The geographic and economic aspects of British Columbia, including fishing, mining, lumbering, agriculture, and industrialization in the south.

Pacific Coast States, 1952 (fs, color, 45 fr, #69). The physical and human geography of the region, showing how the United States is dependent on this section and how these states are, in turn, dependent on others.

The Salmon Story, 1950 (mp, color, sound, 10 min, #23). Portrays the basic stages in the life of the salmon. Various methods of catching and canning are shown.

Story of West Coast Lumber, 1948 (fs, b&w, 66 fr, #58). Follows the lumber operation from beginning to end. The importance of conservation is stressed.

Timber and Totem Poles, (mp, color, sound, 20 min, #65). Lumbering in southeastern Alaska is symbolic of the opportunities to be found in a twentieth-century frontier.

Then and Now in the Pacific Northwest, 1951 (fs, color, 43 fr, #57). Uses past events and the physical environment to explain the present.

Washington State -- Apple Land, 1949 (mp, color, sound, 25 min, #67). Apple production, including soil preparation, irrigation, picking, packing, and cooling.

CHAPTER 13: THE BUSY LANDS OF WESTERN EUROPE

YOUR OWN LOOK AHEAD IN CHAPTER 13

The winter of 1955-56 was one of the most severe that people in Western Europe can remember. In this area, which normally enjoys reasonably mild winters, unexpected freak weather accompanied by snow storms and sub-zero temperatures caused many people to suffer. Transportation lines were blocked, farm animals froze to death, and people living in isolated locations were marooned. Parts of the Seine, Rhine, and Elbe Rivers were completely filled with ice. Some experts said that the rivers were not only frozen solid from shore to shore, but also from the surface to the bottom. This solid ice block hindered the movement of river boats which clog the river during normal times. The ice also endangered many of the dams and bridges which span the rivers.

In Chapter 13, your students will see why the rivers of Western Europe are so important and how industry can be hampered and almost stopped when these rivers are blocked.

The chapter is divided into a number of sections which organize the reading material for your students.

1. "Let's Look at Maps", pp. 258-259.

2. "Fishermen, Sailors, and Traders", pp. 259-262, explains why the Dogger Bank in the North Sea is one of the richest fishing spots in the world and why fishing is an important occupation in marine Europe.

3. "The Forests of Then and Now", pp. 262-263, explains that most of the forests of marine Europe were cut long ago and that despite modern methods of "forest farming", the people must import much of their timber.

4. Countries of Expert Farmers , pp. 263-266, gives an overview of agriculture and shows how despite handicaps, science has aided the farmer in producing large harvests. Farms in England, Denmark, and the Netherlands illustrate the different types of farming.

5. "The Great Cities of Marine Europe", pp. 266-268, accounts for the many large port and inland cities of Western Europe.

6. "Manufacturing in Europe", pp. 268-270, explains how manufacturing began and how the presence of minerals, the invention of machines, and the development of good transportation have made Western Europe one of the largest industrial and commercial centers of the world.

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FOR YOUR OWN READING

The following books contain additional background information about marine Europe.

George D. Hubbard, Geography of Europe, "Lands Having the Marine Climate", pp. 221-406.
Norman J. G. Pounds, Europe and the Mediterranean, Ch. 9-14, and parts of Ch. 6, 7, and 8.

. . . .

MAJOR QUESTIONS

Major Questions may be asked about this chapter. Those suggested below relate to the Primary Objectives dealing with the way people live on the earth and the interdependence of all people in the world. Information for answering is furnished with each question.

PRIMARY OBJECTIVE

To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.

MAJOR QUESTION #1

Why are there many different occupations in marine Europe?

Occupations in Marine Europe

Fishing:

The North Sea provides one of the richest fishing spots in the world.
Fish are an important part of the diet in lands of little sunshine.

Trade:

This area is famous for its seafaring men and merchant marine.
There is a tremendous amount of shipping by boat to and from all parts of the world.

Lumbering:

The forests of Norway, Belgium, and Germany are scientifically managed to furnish part of the timber needs.

Stock Raising:

The need for wool clothing and meat for food plus the abundance of rich pasture lands make sheep and cattle raising important.

Manufacturing:

Manufacturing began here. The nearness to power, coal, and iron ore, plus the many skilled laborers and inventiveness of the people have made it prosper

Transportation:

Canals, rivers, railroads, and highways connect the port cities to inland manufacturing centers.

Service:

Many people are needed to supply necessary services for factory workers and other people engaged in industry.

Dairying:

The marine climate produces good pasturage for dairy cattle.

Mining:

Deposits of iron ore and coal are found in the Saar and Ruhr Basins and in England.

PRIMARY OBJECTIVE

To promote peace by emphasizing the interdependence of all people in the world and the problems of these people.

MAJOR QUESTION #2

What are the important ports of marine Europe and what products are exchanged with the rest of the world?

Ports	Imports	Exports
Liverpool, England	Foods	Manufactured goods:
London, England	Wheat	Iron and steel
Belfast, Ireland	Vegetables	Machinery
Oslo, Norway	Vegetable Oils	Electrical equipment
Copenhagen, Denmark	Meat	Textiles
Bordeaux, France	Fruit	Chemicals
Amsterdam, Netherlands	Sugar	Others:
Rotterdam, Netherlands	Raw material	Fish
Antwerp, Belgium	Lumber	Dairy products
Hamburg, Germany	Iron ore	Wool
	Coal	Flowers
	Tungsten	Flower bulbs and roots

SUGGESTIONS FOR TEACHING

The reading material about the marine lands of western Europe is divided into five sections in addition to a map study. Some new suggestions for teaching are given in the following pages, but any previous suggestion which worked well with your students may be adapted for use with this chapter.

Arousing Interest In The Chapter

1. Phonograph records can be used to create interest. Recordings made in Germany, Belgium, France, England, or any of the other marine countries of Europe are readily available in the United States. There are albums of Christmas carols, folk songs, and popular music. Some American recordings also contain songs sung in foreign languages.

Often interest can be aroused if the recording is played without preliminary remarks. Let your students try to guess which country the music typifies. Perhaps they can recognize the language. Once you have told them a little of the story behind the record -- the title of the song, the country from which it came, what the song is about, the performers, and the type of music represented (folk song, Christmas carol, polka, popular song, classical song, etc.)--your students will probably want to hear the recording again. This time they can listen more carefully to the words and music. Perhaps someone can point out certain similarities between the language of the song and English.

A discussion of the record can be used to stimulate questions and thinking about other aspects of the country from which the music came. Your students can form a list of the things that they want to find out about the country and region.

2. Exhibits of dolls, costumes, silverware, china, souvenirs, travel posters, cheese, candy, perfume, plaids, pictures, lace, and other items from marine Europe may be helpful in stimulating a class discussion.

3. Have students or parents of students who were born or have lived in countries of marine Europe tell your class something about life there.

4. Films and filmstrips, which are listed in the Selected Audio-Visual Aids for Chapter 13 on p. 20 of this booklet, can furnish additional material for your introduction of marine Europe.

Let's Look at Maps (pp. 258-259). After your students have read the introduction to the chapter on pp. 257-258, observed the spatial relationship between western Europe and the United States on the inset map on p. 258, and worked the flight problem in the picture caption on p. 258, you can direct their attention to the map study. The map study for this chapter is found on pp. 258-259, and the maps to be used in connection with it appear on pp. 260-261. Your students will have a chance to review some of the previously learned map skills. Several new skills are introduced. The following chart gives specific details.

Map Skills

Skills	Review	New
Direction	N,S,E,W Latitude	
Distance	Scale--recognition of differences	
Location	Latitude, countries, rivers	
Symbols	Political boundaries, coastline, ocean, bay, gulf, sea, mountains, rivers, lowlands, peninsula, plain, highland, current, cities	Fishing bank
Legend	Hatching to indicate marine regions Shading to indicate rainfall and population density (relative differences)	
Comparison & Inference	Latitude of two areas compared Two maps compared in terms of population density and cities	Inference about importance of bays Inference about occupations of seacoast people Inference about use of rivers

Suggested Answers for Map Study

1. The marine lands of Europe extend from 42°N to 64°N latitude. The marine lands of North America extended from 40°N to 60°N latitude. The marine lands of Europe extend farther north. The marine lands of North America extend farther south.

2. The Kjölen Mountains limit the marine climate on the Scandinavian Peninsula. The Alps and Jura Mountains stop the marine belt near the eastern boundary of France. In Spain, the Cantabrian Mountains and part of the Pyrenees fall within the marine region.

3. This question provides your students with directions for locating level and rugged land in marine Europe.

4. The directions require your students to recall the symbol for ocean currents

and introduces the symbol for a fishing bank.

5. These bays and seas help the farmers of marine Europe because they allow the westerly winds to carry moisture for the crops far inland. The bays and inlets also provide good harbors. People near the coast might be engaged in fishing, water transportation, boat building, or other occupations connected with the sea.

6. The Thames River flows through England. The Seine, Loire, and Garonne Rivers flow through France. The Rhine River flows through Germany and the Netherlands. The Elbe River flows through Czechoslovakia and Germany. The Oder River flows through Poland. The people use these rivers for transportation and waterpower.

7. Norway, parts of France, the northern coast of Spain, and the west coasts of Great Britain and Ireland receive the heaviest rainfall.

8. The differences between rural and urban populations are discussed in this map exercise. Your students will learn that three fifths of the population of western Europe is urban.

Reading About the Marine Lands of Europe (pp. 259-270). Many suggestions have been given for reading lessons. Any of them can be adapted for use with Chapter 13. The "Checking Up" questions on pp. 262, 263, 266, 268, and 270 are excellent guides for daily reading assignments. You might have your students refer frequently to the pictures in the chapter and to the map of western Europe on p. 261. The "Words to Understand," "Questions to Think About," and "We and They," all on p. 271, furnish additional activities that may be used in conjunction with the reading lesson.

Using the Index. The index can be used to help you prepare your class to study daily reading assignments. A few facts looked up in the index and verified by skimming and oral reading will help your class read with a purpose.

For example, you might have your students use the index to prepare them for reading 'The Forests of Then and Now" on pp. 262-263. You might remind your class that forests grow abundantly in the western marine climate of North America. Direct your class to find a passage in the textbook to verify this statement. Since your students have just finished studying the western marine region of North America, some of them may be able to turn to the section on forests and lumbering in the Pacific Northwest without using the index. However, encourage them to use the index rather than thumb through the book.

By checking "lumbering" in the index and using the subtopic "Pacific Northwest", the class will find that this information is somewhere on pp. 246-249. They can then skim these pages to find good verification statements like these:

"The magnificent forests of the Pacific Northwest are the greatest natural resource of our marine region." (p. 246) or "About nine-tenths of the Pacific Northwest is covered by trees..." (p. 246)

After the statement "Forests grow abundantly in the western marine climate of North America" has been substantiated by having a student read the verification passages orally to the class, see whether your class can recall some of the other places in the world that have western marine climate. To refresh their memories, your students can look at the map on p. 241 or at the "World Climate Maps" on pp. 422-423. On these maps they will see that Europe, Chile, and New Zealand also contain marine climate.

"Do forests grow in Chile and New Zealand as abundantly as they grow in North America?" Find and verify the answer. Your students should again refer to "lumbering" in the index. This time, the subtopics "South America" and "New Zealand" will be used. By skimming, they will find on p. 273, "Great forests grow in this part of marine Chile, and lumbering is important"; and in New Zealand, p. 275, "Evergreen forests, fairly dripping with moisture, cover the western slopes"; and "Today, nearly all of New Zealand's forests have been out down.... The government is replanting trees."

Your class will now be ready to investigate whether Europe has forests like other western marine areas. The subtopic "Europe", under "lumbering" in the index, directs your class to p. 263 where they will find, "It is hard to image dense forests in a land which today is mostly covered with flat or rolling fields"; or "Bit by bit, the original forests almost disappeared"; or "There are some valuable forests and wood left in marine Europe in areas that are too rugged for farming".

Your students may have some questions at this point in the lesson. "What happened to the forests?" "Why did they disappear?" "What are the people doing to plant new forests?" "How do the people supply their lumber needs?" By encouraging questions such as these, you can provide your students with a purpose for reading pp. 262-263 and answering the "Checking Up" questions on p. 263. Since this reading passage is short, all students-*reluctant, **average, and ***advanced-can participate at one time.

Additional practice in using the index as a source of information can also be used with "Manufacturing in Europe" on pp. 268-270. Your lesson might be built around discovering the necessary requirements for a successful iron and steel industry.

Have your students check the index to find out why Birmingham, Alabama, and Pittsburgh, Pennsylvania, in the United States have become leading iron and steel centers. "Pittsburgh" in the index has many page references; but if your students remember that the boldface numbers mean map references and that italicized numbers mean pictures, they will have only six pages to skim. The best verification is found on p. 300. "The Pittsburgh area contains huge deposits of high-quality coal."

"Birmingham" in the index has only one page reference, p. 216. "The combination of coal and iron has made Birmingham one of the greatest iron and steel centers of the United States" is a good verification sentence.

Your class will see that high quality coal and a supply of iron ore are essential to the iron and steel industry. "Does marine Europe have plentiful deposits of good coal and iron ore?" To answer this question, your students will have to read pp. 268-270.

Your **average and ***advanced students might also work on an outline map showing some of the important ports and industrial centers of Western Europe. The names of these cities might also be lettered on flash cards and used in class reviews and drills. In the drills and reviews, your *reluctant students can tell the country in which each city is located while your **average and ***advanced students can tell why each city is important. Your ***advanced students may want to find cities and ports other than those listed in the textbook.

Workshop Activity -- Student-Made Slides. An activity which will probably interest most of your students is the making of $3\frac{1}{4}$" x 4" slides (lantern slides). These slides can be used to illustrate oral reports, the reading lessons, a review, or special information. Frequently, an entire lesson can be planned around these slides. Your students should be encouraged to make slides that serve as enrichment material for the lesson.

Frosted or ground-glass slides can be obtained at most photographic dealers. Students can make their own frosted glass by putting an abrasive, such as Carborundum powder and water, between two pieces of plain glass and rubbing them together. Lantern slides are also available; these are made out of a plastic, non-breakable material and sold under the trade name of "Slidecraft". If your room is very bright, you will have the best projection results if you have your students do their drawing on plain glass using pen and India ink. Drawings can be made after coating one side of the plain glass slide with a solution of clear gelatin and allowing it to dry.

One of the advantages of student-made slides is that material can be traced onto the slides from pictures in books. When a student complains that he cannot draw, he can find a suitable picture in a book and trace this onto the rough slide of the ground glass.

Most teachers prefer to have their students prepare the drawings first on paper, in a drawn rectangle measuring $3\frac{1}{4}$" x 4". The pictures should be horizontal. A half-inch border should be left around the edge of this measurement to allow for binding. This $3\frac{1}{4}$ x 4" sketch permits you to see the drawings before your students actually make their slides. The original drawings or pictures from books, such as those on pp. 262, 265, 267, and 269, can be traced onto the ground glass or "Slidecraft" with pencil, ink, colored pencils, or special transparent slide crayons.

A slide projector, which will accommodate lantern slides, is necessary for showing. As the pictures are shown, each student can tell how his slide fits into the total story of marine Europe, or give a special report using the slide for illustration.

The slides can be cleaned by being washed in warm water with scouring powder. The same slide can be used repeatedly. Perhaps some of the slides will be of lasting value. These can be made permanent by placing a piece of clear slide glass over the drawn side of the slide. The edges of the two pieces of glass can be bound together with slide binding tape.

Lantern slides can also be used to teach your students to recognize the countries of Europe by their shapes. By binding two pieces of clear slide glass together along one edge, you can insert the silhouette of a country between these two pieces of glass and flash it on the screen. Your students can learn to identity the country by its shape and size.

SUGGESTED ANSWERS FOR CHAPTER 13

"Checking Up", p. 262

1. The world's most famous fishing grounds are found in the North Sea. These waters are rich in fish because they are abundant in plant life and tiny marine animals which thrive in shallow waters called "banks," where warm and cold currents mix.

2. Fish are an important part of the diet of people who live in marine regions because fish oils contain vitamins necessary to man's health.

3. England, Norway, and the Netherlands have developed into great trading nations because many of their people are skillful fishermen familiar with the sea. Long ago these people learned the art of drying and salting fish and sold most of the salted fish to European Mediterranean lands. Nowhere could more skillful navigators and seamen be found.

"Checking Up", p. 263

1. The original forests of marine Europe disappeared because as the population grew, more and more land was cleared for farming. Later the trees were cut down to make charcoal for use in homes and industry. The forests that are left are highly prized because they furnish valuable products and prevent soil erosion and floods.

2. Two methods of scientific forestry followed by modern European lumbermen are cutting only those trees which have reached a certain size and planting new seedlings. In spite of these conservation methods, marine Europe no longer has enough forests to supply its needs. As a result, hundreds of millions of dollars worth of lumber must be imported every year.

"Checking Up", p. 266

1. Farming in marine Europe is handicapped because many kinds of crops do not grow well in the damp climate with its fogs, clouds, rains, and spells of cool weather. In addition, there are only a few areas with really good soil, and much of the land is poorly drained.

2. Science has helped in the production of crops because scientists have taught the farmer how to use the land to grow an amazing amount of food. Farmers have been taught to rotate crops, fertilize the soil, work the land carefully, and plant crops which thrive in marine climate and European soil.

3. Marine Europe grows large amounts of beets, potatoes, turnips, leafy vegetables, and grains such as oats, rye, and barley. Three specialized crops are vegetables, flowers, and flower bulbs or roots.

4. The marine climate is ideal for stock raising because the cool moist summers favor the growth of rich pastures and meadows which stay green almost all year. The climate also favors the growth of turnips, swedes, barley, and oats which are used for animal feed.

"Checking Up", p. 268

1. The coastline of marine Europe is irregular and broken, forming many fine harbors. Some of the leading seaports are London and Liverpool in England, Belfast in Ireland, Oslo in Norway, Copenhagen in Denmark, Bordeaux in France, Amsterdam and Rotterdam in the Netherlands, and Hamburg in Germany.

2. Canals, rivers, highway, and railroads are used to transport raw materials to the inland cities and to carry their manufactured goods to the seaports.

"Checking Up", p. 270

1. Cheap transportation by ocean, rivers, and canals, large iron and coal resources, and energetic, inventive people have helped the growth of manufacturing in western Europe. Manufacturing as we know it today was created and developed in the homes and small shops of marine Europe. From these beginnings, Europe has developed millions of factory workers famous for their manufacturing skills.

2. The invention of the steam engine was responsible for great changes in both manufacturing and transportation of manufactured goods.

3. The most important manufactured goods include iron and steel, machinery, electrical equipment, textiles, and chemicals. Most of the manufactured goods are either made from iron and steel or use iron and steel somewhere in the manufacturing process. The presence of enormous iron ore and coal deposits in western Europe has given birth to the iron and steel industry which is so necessary for other types of manufacturing.

"Questions to Think About," p. 271

1. Fishing is important to marine Europe because it furnishes food and supplies fish oil necessary for health in lands of little sunshine. Trade is important to Western Europe because it enables the exchange of manufactured goods, which are produced in surplus, for food products and raw materials. Lumbering is important because forests are scarce over most of marine Europe, and the people need lumber and lumber products. Manufacturing is important because it furnishes products, jobs, and materials for trade. Root and grain crops are important as food for people and as animal feed. Dairying and stock raising are important because they supply dairy products, meats, and wool for warm clothing.

2. In marine Europe, the need for all types of products, crops, food, raw materials, and manufactured goods furnishes man with many choices of occupations.

3. Fishing is one of the oldest industries in marine Europe. Because the people were brave and skillful sailors, they were able to sail to distant ports to dispose of their surplus catches of fish, which they had learned to preserve. This was one of the earliest beginnings of trade in the area. Transportation gradually spread to other products as well. The fishermen became navigators and seamen who could sail to any port in the world.

4. Some of the special uses of the lumber from the forests of Norway, Belgium, Denmark, and Germany include the making of pulp, paper, tubs, barrels, furniture, toys, charcoal, and articles used in the dairy industry.

5. The marine climate produces rich pastures for sheep. Wool is a popular textile because it is light as well as warm. It is used to make clothing which is warm and moisture-resistant. Woolen clothing is popular in the damp climate.

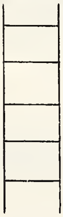
"We and They", p. 271

These questions are best answered by comparing facts learned about marine Europe with observations made in your local community. You might encourage your students to find differences and similarities.

EVALUATION EXERCISES

To Check on Your Students' Understanding of Factual Information

Directions: Climb the ladder by starting at the bottom and answering each question correctly.



5. Name a famous fishing spot in the North Sea.
(Dogger Bank)
4. What are the shallow places in oceans and seas called?
(banks)
3. What marine country in Europe has excellent forests?
(Norway)
2. What does rural mean?
(pertaining to the country)
1. What does urban mean?
(pertaining to the city or a town)

To See Whether Your Students Understand Agriculture in Europe

Directions: Put an X before the phrase or phrases which best complete each statement. There may be more than one answer to a statement.

1. Many European farmers are handicapped by

x a. poor soil
x b. cool weather
c. lack of level land
d. lack of water

2. Science has helped farming by

x a. developing new fertilizers
x b. developing new farming methods
c. developing wood substitutes
x d. developing special crops

3. Stock raising is important because

x a. meat is needed
b. the people like animals
c. animals are raised as pets
x d. good pastures are available

4. Wool is an important textile in this region because

a. it makes pretty cloth
x b. it is warm
x c. it is light
x d. it is moisture-resistant

5. Specialized farms grow

a. wheat
b. corn
x c. flowers
d. barley

6. The farmers of Denmark are famous for their

a. flowers
x b. dairy products
c. flax
d. sheep

To Test Your Students' Knowledge of the Cities of Western Europe

Directions: Tell in which country each of the following cities is located. Also tell whether the city is a port or an inland city.

✓ Hamburg (Germany, port)
✓ Manchester (England, inland)
✓ Oslo (Norway, port)
✓ Bordeaux (France, port)
✓ Paris (France, inland)
✓ Rotterdam (Netherlands, port)

Paris
[illegible]
- main
- Short
- Tokyo

Essen (Germany, inland)
Sheffield (England, inland)
Berlin (Germany, inland)
Copenhagen (Denmark, port)
Antwerp (Belgium, port)
Dublin (Ireland, port)

To See Whether Your Students Can Locate the Countries of Western Europe

Directions: On the map , find the number that indicates the location of each place listed below. Write the appropriate number after each place.

Netherlands 3

Norway 6

England 1

Germany 4

Denmark 5

France 2

(For this exercise, you will need to provide an outline map of Europe. The numbers shown at the left should be added on the map.)

STUDENT READING LIST FOR CHAPTER 13

NON-FICTION

**Aitchison, A., Europe: The Great Trader, Bobbs. Denmark, The United Kingdom, The Netherlands, Norway, and Brittany of Northern France contribute their share to "The Great Trader".

**Garnett, M., France, Macmillan, 1951. The enchantment of Paris is a contrast to life on a farm in Normandy or in a village of Lorraine.

**King, G., Holland, Black. A country below sea level has interesting landscapes, towns, and customs.

*O'Neill, H., The Picture Story of Denmark, McKay, 1952. A thumbnail sketch of the life of the people in Denmark -- their history and what they contribute to the rest of the world.

**Rothery, A., Scandinavian Roundabout, Dodd, 1954. The southern part of Sweden is visited in tourist style on this "roundabout".

**Street, A., The Land of the English People, Lippincott, 1946. Many of the activities of the English people are determined by the climate and resources of this island nation.

**The Young Traveler Series, Dutton. Few of us can afford to go abroad. These books present trips to foreign countries through the eyes of other teen-agers.

Finlay, I., The Young Traveler in Scotland, 1953

Herring, M., The Young Traveler in Ireland, 1953

Larsen, E., The Young Traveler in Germany, 1955.

Proctor, G., The Young Traveler in Sweden, 1953.

Reid, A., The Young Traveler in France, 1953.

Someren, L., The Young Traveler in Holland, 1953.

Trease, G., The Young Traveler in England and Wales, 1953.

FICTION

*Bazin, R., Juniper Farm, Macmillan, 1928. Four French children, raised in close companionship, did not realize the day would come when they would have to part.

**Benary, I., The Ark, Harcourt, 1953. With father in a prison camp, the Lechows try to keep the family together in post-war Germany.

**Benary, I., Rowan Farm, Harcourt, 1954. With father's return from prison camp, the Lechows begin life anew.

**Brink, C., Anything Can Happen on the River, Macmillan, 1934. A holiday in Paris and the recovery of his dead father's stolen barge assure a young French boy of a career as a riverman.

**Davis, R., That Girl of Pierre's, Holiday, 1948. A long wait after the war brings its reward to a young French girl.

*DeJong, D., Level Land, Scribner, 1943. The tranquil life of a Dutch doctor's family is disrupted when war touches their home.

*DeJong, D., Return to Level Land, Scribner, 1947. After the war, the Van Oordts return to their shattered homestead and begin to build for the future.

*DeJong, M., Wheel on the School, Harper, 1954. The absence of storks is really a cause for alarm in The Netherlands. A school decides to remedy the situation and starts a desperate search for wheels.

**Hahn, E., Francie, Watts, 1951. England and Francie quarrel and make up a hundred times during this American girl's year at an English school.

**Hartog, J., The Little Ark, Harper, 1953. A thunderstorm, a broken dike, and a flood was an occasion for tragedy and heroism.

***Hartog, J., The Lost Sea, Harper, 1951. A "sea mouse" is a boy who has been smuggled to sea. Some Dutch boys liked it and some didn't.

*Hogarth, G., Lucy's League, Harcourt, 1951. Problems seem to be the only thing Lucy can collect in her campaign to raise money to visit her American grandmother.

**Knight, E., Lassie Come Home, Winston, 1940. Deported to northern Scotland, Lassie attempts a 400-mile trek through mountains and moors.

*Kyle, E., On Lennox Moor, Nelson, 1954. Though she thought her trip was ruined in England, Laurie found herself becoming interested in the Scottish sheep country and the mystery it held.

**McLelland, I., Shadows on the Moors, Holt, 1955. Dark and stormy Orkney Island provides a background for Cathie's divided loyalties and final choice.

***Miller, J., For a Brave Tomorrow, Dodd, 1950. A girl scout from a Midwestern town learns a great deal about others in a visit to France.

**Teilhet, D., Avion My Uncle Flew, Appleton, 1946. A pistol in a loaf of bread, the midnight walk of a blind peddler, and a glider flown in a desperate cause turn a vacation into a mystery.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 13

A Family of Denmark, 1953 (fs, b&w, 46 fr, #69). Farm life near Copenhagen, where the income is received from the sale of milk and pigs.

A Family of the Netherlands, 1953 (fs, b&w, 46 fr, #69). Land reclaimed from the Zuider Zee is turned into a potato farm.

Belgium and the Netherlands, Lands and Peoples, 1955 (mp, color, b&w, sound, 11 min, #20). Shows relationship between these two countries and how their economy is related to their environment.

British Isles: Land and People, 1951 (mp, color, b&w, sound, 10 min, #20). Depicts how the people have made use of their limited space and resources.

British Trade and Industry (London and New Castle), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Centered in London : the port, financial headquarters, and seat of the government. The tasks of a family living in New Castle are also shown.

Denmark, 1952 (mp, b&w, sound, 10 min, #39). Surveys the life and work of the people and the country.

English Farm, 1955 (mp, b&w, sound, 19 min, #14). Explains the climate of the British Isles and life on a typical small farm in southern England.

English Farm Family, 1952 (mp, color, b&w, sound, 12 min, #45). Gives a picture of modern farming in England. It deals with agricultural problems and shows a model wheat and dairy farm.

Factories, Mines and Waterways (Industrial Western Europe), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Uses the Alsace-Lorraine area to illustrate that heavy industry tends to develop in regions where there is easy access to the raw materials, labor supply, and market.

France and its People, 1955 (mp, b&w, sound, 13 min, #23). Pictures both urban and rural activities.

France, The Land and Its People, 1951 (fs, color, 42 fr, #58). Includes the physical features of France as well as the customs and activities of the people.

Germany, 1951, (fs, b&w, 37 fr, #69). Farm family in Western Germany and the everyday happenings in their lives.

Great Britain -- Its Geographical Position, 1955 (mp, b&w, sound, 11 min, #14). How Britain's geographic position affects the life and interrelationship of its people.

Land Behind the Dikes (Netherlands), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 50 fr, #65). Illustrates how in lowlands by the sea it is possible to enlarge the farming areas by reclaiming the land.

Land of Britain: England, 1951 (fs, b&w, 31 fr, #14). Includes a variety of English scenes encompassing London, Liverpool, and Cardiff.

Life in Lowlands (The Netherlands), 1949 (mp, b&w, sound, 10 min, #20). Demonstrates how dams and dikes are constructed and shows windmills, means of transportation, industries, and life on a dairy farm.

Living in Western and Northern Europe, 1955 (set of 4 fs, color, #58). "Living in British Isles", "Living in France , Living in the Netherlands, Belgium and Luxembourg", "Living in Scandinavian Europe".

Modern France: The Land and the People, 1950 (mp, color, b&w, sound, 10 min, #20). The France of today from the wheat fields of Normandy to the loaded barges on the Seine.

This Is the Saar, 1952 (mp, b&w, sound, 13 min, #55). An advanced film showing the people and industry and their importance to the economy and peace of Europe.

Western Germany: The Land and People, 1954 (mp, color, b&w, sound, 11 min, #20). The industrial, agricultural, and commercial life is shown in relationship to dense population, natural resources, and infertile soil.

Work and Play in Belgium, 1949 (mp, color, b&w, sound, 22 min, #26). A comprehensive story of Belgium, its history, industry, and physical aspects.

FEATURE: A RISING LAND OF PIONEERS (pp. 271-274)

In South America, the western marine climate is limited almost entirely to southern Chile because the Andes Mountains restrict the damp, wet climate. This western marine region stretches for over 1,200 miles along the Pacific Coast.

This section of Chile has three distinct regions. In the south, where coastal mountains block the heavy rainfall, grazing is carried on. Many immigrants settled in the northern section to farm and to raise animals. The people who live in the sunny semitropical section of Chile visit the northern Alpine section to enjoy the scenery and to spend vacations. Few people live in the central portion because the mountains are rugged and rise abruptly out of the sea. There are many fiords and glaciers. The climate is harsh, and rainfall is extremely heavy.

FOR YOUR OWN READING

You may want to refer to the following book for additional background information about marine Chile.

Preston James, Latin America, Ch. 8, section on "Southern Middle Chile" and "The South".

MAJOR QUESTION

The Major Question for this Feature relates to the Primary Objective of acquainting the students with the earth on which they live. You may want to include the Major Question as part of your lesson plans.

PRIMARY OBJECTIVE	MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live. →	Why do more people live in northern marine Chile than in the other two sections?

Features	Southern	Middle	Northern
Physical	Protected by mountains Light rainfall Grasslands	Mountains rising out of sea Fiords Glaciers Heavy rainfall	Rich central valley Ample rainfall Alpine in parts
Occupations	Grazing	None	Farming, lumbering, raising animals
Cities	Punta Arenas	None	Valdivia & Osorno
Population	Few people	Almost none	More people than in other parts

SUGGESTIONS FOR TEACHING

As your class reads this Feature, you may want to stress the following words: glaciers, volcanoes, and Araucanian. The "Checking Up" questions on p. 274 and the map on p. 272 can be of great use in the study of this Feature.

SUGGESTED ANSWERS FOR FEATURE (pp. 271-274)

"Checking Up", p. 274

1. Most of the people live in the northern part of marine Chile. They have chosen to live in this part because it is a wonderful land of lakes and mountains which is cool and pleasant the year round. The people who live in this region include immigrants from Germany, Switzerland, Spain, and sunny semitropical Chile. The native Araucanian Indians also live in the northern part of marine Chile. The inhabitants of this northern part farm, raise livestock, and do some lumbering. The chief crops are oats, potatoes, hay, rye, and wheat.

2. The fewest number of people live in the central section of marine Chile, which lies between 44°S. and 53°S. latitude. This is a land of mountains which rise abruptly from the sea, deep narrow fiords, glaciers, and 80"-200" of rain each year.

3. The people who make their living from herding and ranching live in the extreme southern part of Chile in the area around Punta Arenas, the southernmost city in the world.

4. The central section of marine Chile resembles Norway because it contains fiords, mountains, and glaciers. The northern section is spoken of as Chile's Switzerland because it is the mountain and lake region. The high mountains, beautiful lakes, dense forests, and glacier-cut valleys of this region are typical of those found in the Alps.

STUDENT READING LIST FOR FEATURE (pp. 271-274)

NON-FICTION

**Melbo, R., Miedema, M., & Carlson, S., Young Neighbors in South America, Silver, Harvest time near Osorno and a rodeo with the Araucanian Indians typifies south Chile.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 271-274)

Southern Chile: Tip of a Continent, 1947 (mp, b&w, sound, 10 min, #35). Concerns the people, geography, and history of southern Chile.

South Chile, 1945 (mp, b&w, sound, 21 min, #65). Pictures life and agriculture in the southernmost part of South America.

FEATURE: WHERE NATURE WELCOMES MAN (pp. 274-277)

For many years, New Zealand was isolated from the world because of its out-of-the-way location in the South Pacific. Since 1840, British settlers have been attracted to New Zealand, a land of pleasant climate and varied landscapes. The first British pioneers fought many battles with the Polynesian Maoris who had settled in New Zealand 900 years before. When neither side was victorious, they settled their disputes peaceably and today live together happily.

Your class will learn that sheep raising and dairy farming are the leading activities in New Zealand today. Meat, wool, and dairy products are sent to the far-away markets in Europe.

……

FOR YOUR OWN READING

The following books furnish additional material about New Zealand.

Griffith Taylor, Australia, pp. 396-405.
Otis W. Freeman, Geography of the Pacific, Ch. 15 "New Zealand".
Horace Belshaw, New Zealand.

……

MAJOR QUESTIONS

Commercial activities in New Zealand are influenced by the western marine climate. The Major Question points out many of the relationships between commercial activities and natural environment.

PRIMARY OBJECTIVE		MAJOR QUESTION
To acquaint the students with the earth on which they live, the kinds of people distributed over the earth, and the ways in which these people live.	→	What activities are favored by the marine climate of New Zealand?

Sheep Raising	Dairying
Marine climate and sheltered land on the east side of mountains are ideal for the growth of rich pasture land. Sheep are raised for both wool and meat. Products are shipped to Europe.	Advantages include mild winters, good pasture lands, and fast transportation to the cities and ports. Products: butter, cheese, dried and condensed milk. Farms are small because of labor shortage.

SUGGESTIONS FOR TEACHING

The insert in the map on p. 275 shows the spatial relationship between Australia and New Zealand. The map itself shows physical characteristics of the islands. You may want to have your students draw their own maps of New Zealand. The five "Checking Up" questions on p. 277 furnish guides for your students as they read this Feature. Special emphasis should be placed on the following words: geyser, fuchsia, Kauri, tussocks, and Maoris.

SUGGESTED ANSWERS FOR FEATURE (pp. 274-277)

Checking Up , p. 277

1. The mountains in New Zealand shelter most of the islands from the strong westerly winds and limit the amount of rainfall. There is a mild climate all year round, 25"-50" of rain annually, good soil, and much land that is level or rolling.

2. New Zealand has not become a popular vacationland because it is in an isolated location. It is far away from Europe and the United States. Air travel may help to overcome this handicap.

3. Shearing time on New Zealand's sheep stations comes around Christmas. The shearing is done by hand because machines cut the wool so closely that if a late cold spell comes, the sheep may suffer or even die.

4. Factors which favor the dairy industry in New Zealand include mild winters and good pasture lands. Also, dairying districts can easily be reached by truck or railroad.

5. The Maoris, who came to New Zealand about 1000 years ago, were the first people to live on the islands. They came from some of the Pacific islands to the north. The British settlers started to arrive a little over 100 years ago. At first, there were wars between these two groups of people, but today they live together in peace and harmony.

STUDENT READING LIST FOR FEATURE (pp. 274-277)

NON-FICTION

**Harrop, H., The Young Traveler in New Zealand, Dutton,1955. A teen-ager travels through beautiful New Zealand.

**Irwin, W., & Irwin, D., Australia and New Zealand, Macmillan. The story of a family's visit to New Zealand provides a description of these southern islands.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 274-277)

High Country Sheep Station, (fs, b&w, 33 fr, #50). Set in the high mountain country c South Island, it tells the thrilling story of a sheep musterer and his family.

Land of Contentment, 1938 (mp, b&w, sound, 9 min, #60). Presents a scenic view of New Zealand.

Life on a New Zealand Dairy Farm, (fs, b&w, 37 fr, #50). A day in the life of a dairy farmer is pictured as being more than just milking cows.

New Zealand: Country and People, (fs, b&w, 46 fr, #50). What they are like, where they live, and what they do.

Primary Production in New Zealand, (fs, b&w, 55 fr, #50). A description of exports from the farm and the factory.

REVIEWING UNIT SIX

In studying the text, pictures, and maps in Chapters 12 and 13 and in the two Features, and in doing projects and activities to enrich their study, your students have learned many different facts and ideas about western marine lands. In your unit review, you can help them to organize what they have learned and to apply this learning toward understanding global patterns.

Pages 277-278 of the textbook offer some suggestions for your review of Unit Six. "A Broader View" on pp. 277-278 pulls together many of the geographic factors which were noted in Chapters 12 and 13 and in the Features. This material enables your students to see the western marine lands of the world as a whole. The "Questions to Think About" and "Your Geography Workshop" on p. 278 should also be included in the review.

ADDING UP IDEAS

As you guide your class in this review, some of the things you will probably want your students to remember about marine lands are listed below:

1. The marine regions are found on the western sides of continents north of 40°N. latitude and south of 40°S. latitude.

2. Westerly winds prevail and carry with them moisture-laden air from adjacent oceans, causing much foggy and cloudy weather.

3. Summers are usually cool, and winters are usually mild.

4. Northwestern Europe has particularly mild winters because of the warm North Atlantic Drift.

5. The growing season is long, 180-200 days, but too cool and rainy for many crops.

6. Precipitation continues throughout the year, but there is more rain in the cooler months. There is never a serious dry spell.

7. Forests were the original vegetation due chiefly to the mild, even temperatures and abundant rainfall throughout the year.

8. Occasionally, as in 1955-56, marine Europe has a very cold winter because cold air masses move in from Russia and Siberia.

Suggested Answers for "Questions to Think About," p. 278

1. Marine areas have contributed many things to the rest of the world. Contributions include: millions of people who have settled in other parts of the world; ways of farming such as the dairy industry; numerous inventions; science applied to farming and other industries; the factory system of manufacturing; fine art, music, and literature; and democratic government.

2. This activity requires investigation and research by the class.

3. Findings can be presented in the form of an oral class report.

4. People in marine lands use their rugged lands for raising sheep, planting orchards, and forests. The water bodies are used for fishing and transportation.

5. These facts, which are stated in the text, can also be read from the pictures. (The suggested answers mention only a few facts; many more could be listed.)
   p. 246: size of the trees in Pacific Northwest
   p. 251: orchards and mountains
   p. 255: seaports and trading
   p. 262: the fishing industry
   p. 269: manufacturing
   p. 276: sheep raising

The pictures show that these are busy lands because so many different ways of making a living are shown. They are green lands because of the abundance and various kinds of vegetation.

Workshop Activities. "Your Geography Workshop" on p. 278 gives suggestions for student projects. Some additional project ideas are listed below. These suggestions may be followed exactly as stated or they may be adapted to apply to a specific chapter or feature in the unit.

1. Collect samples of wood and other products from marine lands and add them to the classroom museum.

2. Collect labels from articles which come from marine lands. For example, salmon, cheese, candy, apples, berries, clothing, canned goods, and toys. Mount and display the collection.

3. Make a totem pole and tell about its use.

4. Make a map of Western Europe, showing the industrial areas, manufacturing cities, chief waterways, and port cities.

5. Make a sand-table display of models of different types of farms found in marine Europe.

6. Draw graphs and charts comparing the climate and activities in marine lands with those in your local community.

7. Draw a mural depicting the life history of the salmon.

8. Draw posters for display encouraging people to protect their forests.

9. Keep a scrapbook of pictures, current events, and interesting facts about marine lands.

10. Write an original story or a poem about life in one of the marine regions.

11. Write a report about the Maoris of New Zealand, the Araucanian Indians of Chile, or the Indians in the Pacific Northwest.

12. Write to the U.S. Forest Service, Washington 25, D.C., for material on forest conservation. Mount the material for display.

13. Read and report on folk tales which are typical of various marine sections.

14. Report or draw a chart explaining the difference between England, Great Britain, British Isles, British Empire, and British Commonwealth of Nations.

15. Investigate the effects of the great Ice Age on Western Europe.

16. Prepare a dramatization about the life of the lumberman.

EVALUATING THE UNIT

After your review, you will probably want to evaluate the progress your class has made in reaching the Primary Objectives as they apply to western marine regions. To evaluate progress, you will need to measure how far your class has gone in acquiring skills, factual information, and attitudes.

You may wish to construct tests based on the reading material, pictures, and maps in the chapters and features of Unit Six. You may also wish to use some of the Suggestions for Teaching, Major Questions, or Evaluation Exercises in this booklet.

See also Unit Test Six in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

UNIT SEVEN: LANDS OF FOUR SEASONS

BOOKLET #9
Your Own Look Ahead 1
Ch. 14: The Heart of North America . . 2
Ch. 15: The Heart of Eurasia 15
Feature: Bitter Lands of the Far East. 23
Reviewing Unit Seven. 25

YOUR OWN LOOK AHEAD INTO UNIT SEVEN

The most productive regions of two great countries of the world, the United States and the Soviet Union, lie in moist continental areas. These regions contain not only some of the richest farmland in the world but also some of the most important industrial areas. In the United States, industry began to grow rapidly toward the end of the 19th century, and it is still expanding. There seems to be no limit to the energy, resourcefulness, ingenuity, and technical skill of American industry.

The development of basic industry in the Soviet Union began much later, after the Bolshevik revolution in 1917. Industrial growth was slow until World War II forced the Soviets to produce huge supplies of war material to help stem the German advance across their country. Even though much of the evidence of the U.S.S.R.'s industrial development remains hidden behind the "Iron Curtain", there is every reason to believe that manufacturing is still expanding.

In this unit, your class will have an opportunity to compare life in the moist continental sections of the United States and free countries of Europe with life behind the "Iron Curtain". Your class will also have an opportunity to examine some "Major Questions" which will help them to accomplish the "Primary Objectives" of The World Around Us.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To acquaint students with their own country so that they will have a better knowledge and understanding of its position in the world today. Generalization: Agriculture is prosperous in the moist continental region of North America.	Chapter 14, Question #1: What types of agriculture are practiced in the moist continental section of North America?
Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples. Generalization: The presence of, or nearness to, iron and coal has helped industry develop in moist continental regions. The industrial region of North America exchanges goods with the rest of the world.	Chapter 14, Question #2: Why is the moist continental section of the United States the world's leading industrial region?
Objective: To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live. Generalization: Huge areas of moist continental lands in Europe and Asia are controlled by the Communists. Free countries also exist and prosper outside the "Iron Curtain".	Chapter 15, Question #1: How does the Soviet Union control agriculture and industry behind the "Iron Curtain"? Chapter 15, Question #2: Why is Sweden's moist continental area called the "Heartland of Sweden"? Feature (pp. 320-323), Question #1: How do the people live in the moist continental sections of Communistic eastern Asia?

AROUSING INTEREST IN THE UNIT

Newspaper headlines dealing with the weather make an effective introduction to the study of the moist continental regions. Headlines such as these may be used: "Light snow on the way tonight." "Cold wave is worst in over a year." "Strong winds to end warm spell." "Low of 26 on way here." "Nineteen die as temperatures soar to

103°". "Driest year in history." 74° heat tops February record but snow may break wave."

If your community is in the moist continental area, your students will be able to give many more examples from their own experiences with changes in the weather. The headlines should be discussed. You might ask your class to point out how the changing seasons affect different activities.

You may want to read the following poem to further point out seasonal changes.

LOOKING AT THE NEW CALENDAR

There's coasting in the wintertime
   When silver sleigh bells ring;
And kites to fly and tops to spin
   As soon as it is spring.
There's swimming in the summertime
   And football in the fall.......
There are so many outdoor games
   I cannot name them all.
For every month and season
   Has something good to give
And playtime is gaytime
   And life is fun to live!

(Poem by Rowena Bennett, reprinted from The Christian Science Monitor)

The class can try to determine where the lands with four seasons are located. Have your students examine the map on p. 279 and the one on pp. 422-23 to locate the moist continental regions. The reading material on pp. 279-82 tells about the different seasons in moist continental areas. Points from the discussion can be checked and additional information can be added as your students read these pages.

The importance of weather to this region furnishes an opportunity to review some of the factors that make up weather and climate. These factors are discussed on pp. 36-40 of the textbook.

The "Climate Facts" on p. 282 give climatic data for Warsaw, Poland, which has long summers, and for Vladivostok, U.S.S.R., which has short summers. Students may want to compare these statistics with those for their local community to see differences and similarities.

CHAPTER 14: THE HEART OF NORTH AMERICA

YOUR OWN LOOK AHEAD INTO CHAPTER 14

The moist continental area in North America extends from southern Canada to the Southland of the United States and stretches from the Atlantic Ocean to the Great Plains. The first settlers who came to the eastern portion of this region found the land covered by forests. The climate, they soon discovered, was unlike that which they had known in Europe. Nevertheless, the land was cleared and crops were planted. After a very uncertain beginning, settlements began to thrive and prosper. More and more settlers came to find new homes in the American wilderness.

As the population grew, some people pushed west of the Appalachian Mountains to find new farmlands on the broad, grass-covered interior plains. Others used the abundant water power and nearness to the ocean to begin manufacturing and trade with people in other regions. The presence of coal, oil, and natural gas together with an abundant supply of other minerals helped manufacturing to grow. The rivers, lakes, and canals served the transportation needs at first, but these were soon supplemented by railroads and highways.

Today, the moist continental region of North America is the most productive industrial and agricultural region in the world. Farmers in this vast region produce food to help feed millions of people, and factories make everything from the smallest radio part to the largest battleship.

Chapter 14 is divided into a number of sections that will help your students with their reading.

1. "Let's Look at Maps," pp. 285-86.

2. "The Winter-Wheat Region," pp. 286-91, describes the large farms and the conservation methods used by farmers in the agricultural belt west of Kansas City, Missouri.

3. "The Spring-Wheat Region," pp. 291-93, enumerates the problems of farmers in the Dakotas and parts of Alberta, Saskatchewan, and Manitoba.

4. "The Corn and Livestock Belts," pp. 293-96, explains how climatic conditions favor the growth of corn in the Midwest and how farmers make good use of two-story agriculture."

5. "Dairy Products and Special Crops," pp. 296-98, tells about general farming and dairy farming in the moist continental region of the United States.

6. "The World's Leading Industrial Region," pp. 298-302, examines the numerous industrial regions in the area and explains why manufacturing has developed in various places.

7. "A Land of Great Cities," pp. 302-304, accounts for the growth of New York City and Chicago into the two largest cities in the United States.

. . . .

FOR YOUR OWN READING

Additional background material can be found in the following books.

White, C. Langdon, and Foscue, E. J., Regional Geography of Anglo-America, Ch. 4, "Northeastern Anglo-America", Ch. 9, "The Agricultural Interior."

Smith, J. Russell, and Phillips, M.O., North America, Chs. 4,5,7,10,16-19,23.

. . . .

MAJOR QUESTIONS

You will probably want your students to answer the Major Questions suggested for this chapter. Related information is given for your use in the classroom.

PRIMARY OBJECTIVE: To acquaint students with their own country so that they will have a better knowledge and understanding of its position in the world today.	→	MAJOR QUESTION #1: What types of agriculture are practiced in the moist continental section of North America?

Types of Agriculture

Winter-Wheat: 1. Grown on large farms. 2. Much machinery is used. 3. Wheat is rotated with pasture grass, sorghums, and fallow land. 4. The western boundary shifts with the yearly rainfall.	Corn and Livestock: 1. Climate favors the growth of corn. 2. Much machinery is used. 3. Crops are used to fatten livestock. 4. Corn is rotated with soybeans, clover, and winter-wheat.
Spring-Wheat: 1. Grown on large farms. 2. Much machinery is used. 3. Problems: unpredictable weather, drought, hail, and grasshoppers. 4. The western and southern boundaries shift with the yearly rainfall.	Dairying: 1. Climate favors pasture and fodder crops. 2. Pure water is available. 3. Near population centers. 4. Transportation is good.
	General Fruit & Truck Farming: 1. Specialized crops are in demand. 2. Transportation is good. 3. Near centers of population.

PRIMARY OBJECTIVE: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these people.	→	MAJOR QUESTION #2: Why is the moist continental section of the United States the world's leading industrial region?

Reasons	Centers
1. Power is abundant Coal Waterpower (hydroelectricity) Oil Natural gas	1. New England: Light manufacturing
2. Minerals are present Iron ore Lead Zinc Copper Salt Limestone	2. New York and Eastern Pennsylvania: Variety of manufactured goods Ocean trade Transportation 3. Pittsburgh and Cleveland: Iron and steel Machinery
3. Transportation is highly developed Waterways: lakes, rivers, canals Railroads Highways Airlines	4. Ohio and Indiana: General manufacturing Food processing 5. St. Louis: Livestock Distribution center
4. Skilled workers	
5. Invigorating climate	6. Chicago and Milwaukee: Farm equipment and machinery Transportation center Meat packing
6. Near rich farmlands	7. Southern Michigan: Iron and steel 8. Mohawk Valley and Lake Ontario: Electrical equipment Textiles

SUGGESTIONS FOR TEACHING

"The Heart of North America" contains a great deal of information about the United States. If your class has previously studied United States geography, they will be able to see how this section fits into the total picture of the world. If your class has never studied the geography of the United States, you will want to spend considerable time on this important chapter.

You may use any of the teaching suggestions which have been given in previous units by adapting them to Chapter 14. Some new ideas will be given with this chapter.

Arousing Interest in the Chapter.

1. Iron and steel form the backbone of any industrial nation. Your class may be interested in forming a list of all the articles that they use in their everyday life which are made from iron and steel. Your students might also list all the things in the classroom which are made from iron and steel. As the list grows in length, your class will begin to understand why the iron and steel industry is so important to the United States.

Films and filmstrips which show mining of iron ore, loading and shipping, blast furnaces, tapping blast furnaces, red-hot molten metal in ladels, making steel in open hearth or Bessemer converter, rolling mills, wire mills, and other processes are colorful, dramatic, and interesting. Some are listed in the "Selected Audio-Visual Aids for Chapter 14" on pp. 13-15 of this booklet.

As your class discusses the iron and steel industry and its importance to the people of the United States, you can draw their attention to the areas which manufacture this valuable metal. "Why is iron ore taken to Pittsburgh to be smelted?" "Where is iron ore mined?" "How is it transported?" "What is needed to make steel?" "Why is steel so important?" "Why is other manufacturing dependent on steel?" "Where is the richest manufacturing section of the United States?"

Have your class make a list of the things they would like to find out about this region. If your local community happens to be in this region, your students may find it stimulating to see how their local community exemplifies the various activities described in the chapter.

2. You might discuss with your students the early history of the United States. "Why did the early settlers come to the New World?" "What did these settlers find here?" "How did they make a living?" "How did manufacturing start?" "Why did people move westward?" Questions such as these can lead the discussion into the development of manufacturing or the growth of the farming regions in the central part of the United States. Perhaps some of your students have seen farms in this section and can describe them.

3. Personal experience can be another interest getter. Have someone tell about a trip to New York or Chicago.

Let's Look at Maps (pp. 285-86). After your class has read the chapter introduction on pp. 283-284, seeing an overview of the moist continental sections of North America, they will be ready to examine these regions on the map. The map study begins on p. 285, but your students must turn to pp. 286-87 in order to see the maps. This exercise reviews and reinforces many of the map skills. New and reviewed skills are listed in the following chart.

Map Skills

Skills	Review	New
Direction	N,S,E,W Latitude	
Distance	Scale--recognition of differences	
Location	Latitude, longitude	
Symbols	Political boundaries, state boundaries, provinces, lakes, mountains, mountain range, rivers, tributaries, river source, cities	
Legend	Shading to indicate rainfall and population density (relative differences) Shading to indicate rainfall and population (people per sq. mi. and inches)	Hatching to indicate moist continental regions (long and short summers)
Comparison & Inference	Location of two areas compared Rainfall of two areas compared Population densities of two areas compared Inference about importance of rivers	Inference about importance of lakes Comparison of rainfall and length of summer Inference about rainfall-summer relationship Inference about effect of rainfall on crops

Suggested Answers for "Let's Look at Maps"

1. Observation shows that the moist continental climate with long summers is found in the southern part of the area.

2. The moist continental area of North America extends from 35°N. to 54°N. latitude.

3. The area with long summers has the most rainfall. This means that crops have both a longer growing season and plenty of moisture.

4. Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, and Nova Scotia in Canada have some moist continental climate. North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, Kentucky, Ohio, West Virginia, Tennessee, North Carolina, Virginia, Maryland, Pennsylvania, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine, lie wholly or partly in this moist continental region. The Great Lakes furnish a valuable waterway because they connect the interior portion of the country with the East. They are connected to the Atlantic Ocean by the St. Lawrence River, which flows from Lake Ontario.

5. Westward from the Atlantic Coastal Plain are the Appalachian Mountains. The land west of the mountains is fairly level.

6. Three tributaries of the Mississippi River which flow through this region are the Missouri, Ohio, and Arkansas Rivers. The St. Lawrence has its sourde in Lake Ontario. The river is important to the United States as well as Canada because it furnishes both a waterway and an outlet to the Atlantic Ocean.

7. Encourage your students to find the many cities that are located in this region.

8. The eastern section and the area around the shores of Lake Michigan, Erie, and Ontario are the most densely populated. In the eastern part, the density is over 250 people per square mile. Around the Great Lakes there are 125-250 people per square mile. West of the Mississippi River the density is 25-125 people per square mile.

Reading pp. 286-304 to Fill in an Outline. On p. 17 of Booklet 5, suggestions were made to give your class an opportunity to read and then practice outlining. The following outlines, however, are designed to be distributed to your class before they start to read. As the reading of Chapter 14 progresses, students are to fill in the blanks on each outline.

In the sample outlines given here, the word or words which are to be left blank are indicated by parentheses. The page references for answers are also furnished; these page references should not be given to the students. One-star items represent material for the *reluctant students, two-star items should be added for the **average students, and three stars indicate additions for your ***advanced students.

The outlines for the entire chapter can be mimeographed and given to your students when they begin their study. Your faster students can thus work at their own pace and have additional time for project work, supplementary reading, and other enrichment activities. If mimeographing is impossible, a section of the outline can be written on the board each day.

OUTLINE TITLE: MOIST CONTINENTAL NORTH AMERICA

I. Agriculture
    A. The Winter-Wheat Area, pp. 286-91
        1. Location -- map, p. 291
            *a. Part of (Kansas)
            *b. Part of (Oklahoma)
            *c. Part of (Nebraska)
            *d. Part of (Colorado)
            *e. Part of (Texas)
        2. Farms
            a. The farms are *(large) in size, p. 289
            b. Houses are built from *(wood), p. 288
            c. The *(windmill) furnishes power, p. 288
            d. *(Windbreaks) are rows of trees, pp. 288-89
                **1. (Shelter house and barn from wind)
                **2. (Prevent snow from blowing in winter)
                **3. (Prevents soil erosion)
        3. Crops
            a. Winter-Wheat
                1. Planted in the *(fall), p. 289
                2. Harvested in the *(early summer), p. 289
                3. Machinery is used in farming because the land is *(level) and the farmers are **(prosperous)
                *** a. (gang plows), p. 289
                *** b. (gang harrows and discs), p. 289
                *** c. (combines), p. 289
                4. The harvested grain is stored in a *(grain elevator), p. 289
            b. Pasture land
                1. *(two-thirds) of the land is left in pasture to prevent soil erosion, p. 290
                2. *(livestock) is grazed on the pastures, p. 290
                *** a. cattle
                *** b. horses
                *** c. hogs
                *** d. mules
            c. *(Sorghums) are grown, p. 290
                1. Resist **(drought), p. 290
                2. Used as food for **(livestock), p. 290

4. Conservation
   a. *(Crop rotation), p. 290
      1. The first year a farmer plants ***(sorghum), p. 290
      2. The second year he leaves the land ***(fallow) to gather ***(moisture), p. 290
      3. The third and fourth year he plants ***(winter-wheat), p. 290
   b. *(Contour plowing) and *(strip cropping) are used to prevent the water from running off too quickly
   d. Damming streams and digging ponds allows more moisture to sink into the soil

An additional outline can be constructed for "The Spring-Wheat Region," pp. 291-92; "The Corn and Livestock Belt, pp. 293-96; and "Dairy Products and Special Crops," pp. 296-98.

A similar outline can be used with the reading material about "The World's Leading Industrial Region,"pp. 298-302. Part of an outline for this material is given here as an example.

II. Industry,pp. 298-302
   A. Advantages
      1. Plenty of *(power), p. 298
         ** a. (Waterpower), p. 299
         ** b. (Coal), p. 298
         ** c. (Gas), p. 298
         ** d. (Oil), p. 298
      2. Abundance of *(minerals), p. 298
         ** a. (iron ore), p. 299
         ** b. (copper), p. 299
         ** c. (lead), p. 299
         ** d. (zinc), p. 299
         *** e. (salt), p. 299
         *** f. (silica), p. 299
         *** g. (clay), p. 299
         *** h. (limestone), p. 299
      3. Good *(transportation) systems, p. 299
         a. Waterways
            1. ***(rivers), p. 299
            2. ***(lakes), p. 299
            3. ***(canals), p. 299
         b.**(Railroads), p. 299
         c.**(Highways), p. 299 d. Air routes
   B. Manufacturing Centers
      1. *(Southern New England) has light manufacturing, p. 299
         a.***(hardware), p. 299
         b.***(pots & pans), p. 299
         c.***(watches & clocks), p. 299
         d.***(costume jewelry), p. 299
         e.***(electrical appliances), p. 299
      2. *(New York and Eastern Pennsylvania), p. 299
         a. Cities
            1. New York City
            2. **(Trenton), p. 299
            3. **(Philadelphia), p. 299
            4. **(Baltimore), p. 299
         b. Produces large *(variety) and amount of manufactured goods, pp. 299-300
            1. ***(iron & steel products), p. 300
            2. ***(clothing), p. 300
            3. ***(paper), p. 300
            4. ***(chemicals), p. 300
      3. Pittsburgh-Cleveland District
         a. *(Advantages), p. 300
            1. close to *(coal) which is used for power, p. 300
            2. close to *(water) for use in manufacturing and transporting of iron ore, p. 300
         b. Leading *(iron and steel) producer in the United States, p. 301

With the addition of the Ohio-Indiana District, the St. Louis District, the Chicago-Milwaukee District, the Southern Michigan District, and the Mohawk Valley-Lake Ontario District, your outline will be complete.

"A Land of Great Cities" on pp. 302-04 can be studied in the same manner. After outlining each section, your students can review the material by answering the "Checking Up" questions on pp. 290, 293, 296,298, 302, and 304. To summarize the chapter, you may want to use the activities listed under "Reviewing the Chapter" on p. 304.

Suggestions for Drills. Classroom drill is one of the best ways to review many of the important names and ideas in Chapter 14. There are many different methods for conducting class drills. Some of these have been suggested before, such as the scrambled sentences on p. 20 of Booklet 5, the living paragraph on p. 18 of Booklet 3, the fill-in sentences on p.11 of Booklet 5, and flash cards on p. 18 of Booklet 4. You might want to try some new ideas to help your class review important names and concepts.

Silhouettes of States. Cut the silhouettes of states from pieces of construction paper. Pin or stick these silhouettes on the board, curtains, walls, and/or desks. Have students look at the silhouettes of the various states. In order to gain possession of a particular silhouette, the student must give its name. The student or group of students collecting the most silhouettes wins. Another group of students might act as judges. The judges can determine whether the state has been named correctly.

Similar silhouettes can be shown on a movie screen or the wall by using student-made lantern slides (see p.16 of Booklet 8. The drill can be handled in the manner suggested above.

Drill on Outline Map. Many classrooms have a large outline map of the United States. Number some of the states, cities, water bodies, and other information on the blank map, and have your students identify each number.

Where am I? A student describes a certain location. Another student tries to guess the state, city, or area from the description. Example: "I am standing on a large flat plain. There is a farm with a windmill in the distance. It is July and the combines are cutting the wheat nearby. Where am I?" (Winter-wheat Belt).

Spelling Bee: Your class can have a spelling bee using the names of the cities, towns, states, and water bodies in the moist continental section.

Twenty Questions: Have a student select a city, state, crop, or manufactured article from this region. The rest of the class tries to guess what he has selected by asking questions which can be answered by "yes" or "no." The class wins if it can identify the item by asking no more than twenty questions.

State and City: Have one student call out the name of a state. Another student must furnish the name of a city located in that state and tell why the city is important.

SUGGESTED ANSWERS FOR CHAPTER 14

Checking Up, p. 291

1. The western boundary of the winter-wheat region shifts eastward or westward from year to year depending on the amount of rainfall and other moisture.

2. Farms are larger in the western part of the winter-wheat region because the rainfall is less dependable and each farmer needs more land to be sure of earning a living.

3. Winds blow in the winter-wheat area most of the year, and the windmill is used to furnish power to draw water up through pipes from wells deep in the earth. In the winter, windbreaks protect the farmer's house and barns from cold winds. They also stop snow from blowing across the plains so that in spring when the snow melts, it can add moisture to the soil. In the summer, the windbreaks protect houses, barns, and cattle from the hot, dry winds and prevent valuable soil from blowing away.

4. Here are four ways the farmer has adjusted his farming methods to reduce the risk of having too little water for his crops: (1) leaves about two-thirds of the land in pasture, (2) on the other one third, he plants drought-resistant sorghum as well as wheat, (3) rotates crops and leaves land plowed and cultivated but not planted so that the soil can soak up moisture and store it, and (4) dams streams, digs ponds, and plows on the contour to slow down the runoff of rainwater so that more water sinks into the ground.

Checking Up, p. 293

1. Winter-wheat is planted in the fall and harvested in early summer. Spring-wheat is planted in the spring and harvested in the late summer or early fall.

2. Nature makes life harder for the spring-wheat farmer than for the winter-wheat farmer because: (1) winters are long and bitterly cold, (2) summers are burning hot, and (3) the frost-free season varies from 150 days in the south to as few as 80 days in the northwest.

3. Four problems of the spring-wheat farmer that are still unsolved include: two-, three-, or even four-year dry spells, undependable rainfall, hailstorms, and grasshoppers. Scientists have helped the spring-wheat farmer by developing new kinds of wheat that will grow and ripen in a short growing season.

Checking Up, p. 296

1. The climate and land of the corn belt favor the growth of corn in many ways. Corn needs long, hot, humid days and hot, humid nights. The growing season must last from 130-180 days. Summer temperatures must average 70°-80° and not fall below 55° at night. There must be adequate rainfall. The corn belt meets all of these requirements. In addition, the land surface is almost level, and glaciers long ago deposited deep layers of rich soil over the region.

2. The corn-belt system of crop rotation usually follows this pattern: For two years a field is planted in corn; the third year, oats or soybeans; fourth year, winter-wheat; fifth year, clover. Soybeans and clover add nitrogen to the soil which the corn needs in order to grow. The clover is plowed under to add humus to the soil. The farmer grows the winter-wheat as a cash crop.

3. Farmers use tractors, drills, multiple-row cultivators, and corn-pickers to help them with farming.

4. "Two-story agriculture" is the corn-belt farming system. The "lower story" consists of planted crops; the "upper story," of livestock and their products. The corn-belt farmer uses his corn and other crops to feed hogs, cattle, horses, and poultry. The farmer gets about three-fourths of his income from his livestock and only one-fourth comes from the sale of crops.

Checking Up, p. 298

1. Conditions which are favorable in the dairying belt are: pure, mineral-free water; cool temperatures; frequent rains; and good transportation.

2. Modern machines used by the dairy farmer include milking machines, machines for storing and moving hay and for lifting hay and other fodder crops in the fields.

3. There are many dairy and fruit-and-vegetable farms near big cities because the people who live in these urban areas need the food and provide a large market. Products are transported by trucks, railroads, and airplanes.

4. Some special crops raised in this belt are: sugar beets and flowers in Michigan; grapes and fruit along the southern shores of Lake Erie and Lake Ontario; tobacco in Connecticut; cranberries in Massachusetts; and potatoes in Maine.

Checking Up, p. 302

1. Forests had to be cleared, the soil had to be turned, rich minerals had to be discovered, transportation systems had to be developed, factories had to be built, and workers had to be obtained before the great industrial section of the United States could grow.

2. Two important needs of any industrial area are steady supplies of minerals and power. There are large supplies of both in the moist continental area of North America. Coal, oil, natural gas, iron ore, copper, lead, zinc, salt, silica, clay, limestone, and marble are found in this area.

3. Lake and river transportation, highways, canals, and railroads have helped to develop this industrial area.

4. The best answer to this question will be obtained through the use of maps, text, and class discussion.

Cities	Reasons for Growth
Boston	Good harbor, near fishing grounds, on the Atlantic seacoast, development of ocean trade, and finally manufacturing of shoes, boots, ship equipment, woolens, etc.
Baltimore	Located on Chesapeake Bay, a protected harbor, surrounding area good farming, in early days supplied wheat and cattle for export; later coal, manufacturing gradually developed.
Philadelphia	Location on lower Delaware, upper limit for ocean-going vessels, also access to interior lands for both exporting and importing, near coal fields and can import iron ore cheaply, development of oil refining ship building, iron and steel industry, chemicals, etc.

Pittsburgh	Location at junction of Allegheny and Monongahela Rivers. The Ohio River gave access to the rich interior plains; abundance of coal and oil deposits and access to the lake iron ores.
Cleveland	Location on Lake Erie where a small river provided a harbor, nearness to Pennsylvania coal and Lake Superior iron ore.
Indianapolis	Center of a rich farming district producing a surplus of farm products -- wheat, corn, and meat; canning industry developed and is still outstanding.
Cincinnati	Ohio River port in a rich corn-and-meat-producing district, meat packing developed as a result, later other manufacturing.
Columbus Dayton	Growth at first based on development of agriculture; then on coal and oil nearby plus excellent transportation -- canal and later railroad.
St. Louis	Near junction of Missouri and Mississippi Rivers and of Illinois and Mississippi Rivers; early growth based on river transportation, then on agricultural development; near Illinois coal fields; starting point for first railroad across the Mississippi.
Milwaukee	Excellent harbor on west coast of Lake Michigan.
Detroit	Located in area where automobile industry developed; good location on Detroit River connecting Lake Huron and Lake Ontario; also at one of the few easy crossings into Canada.
Buffalo	Location near Niagara Falls and west entrance to Mohawk Valley, break in land and water transportation; a natural meeting place for lake and canal trade, and railroads; development of hydroelectric power.
Toronto	Location on north shore of Lake Ontario, between Canada's rich farmlands and Canada's mineral district to the north, near enough to Niagara Falls to have cheap electric power.

New York and Chicago are discussed in detail in the answers to the "Checking Up" questions, p. 304.

Checking Up, p. 304

1. New York City has many natural advantages which have helped to make it the greatest port in the United States. The wide mouth of the Hudson River, the East River, New York Bay, and other nearby bodies of water form a well-protected, deep harbor with over 700 miles of shoreline. New York is also one of our nearest ports to Europe. It is the center of a large coastal trade because toward the northeast lies industrial New England and to the southwest lies the agricultural South. The city lies at the entrance of a natural route of travel, the Hudson-Mohawk Valley, which leads to the Great Lakes and the West. Thus, New York is also known as the gateway to the interior of North America.

2. A harbor on the shore of Lake Michigan gave Chicago its first advantage as a trading center. The development of the steamboat brought thousands of settlers from the East through Chicago to lands of the Mississippi basin. As the corn belt and the wheat lands began to flourish, Chicago became the main shipping point for grain and livestock bound for eastern markets.Chicago developed as the natural stopping place for railroads pushing from East. Later, railroads were built starting at Chicago and going to the west or southwest, and the city became a railroad center. As our country grew, farmers needed new implements and machines, and Chicago became a leading manufacturer of grew equipment. Other manufacturing developed similarly, and trade and manufacturing frew side by side. Now Chicago is the second largest city in the United States and the most important city to many Midwestern farmers.

Questions to Think About, p. 304

1. The moist continental climate is a rather difficult climate in which to live and work because it has many changes and variabilities. Weather is actually the most important factor. It may change from day to day. It is hard to predict and even harder to control.

2. Railroads were needed badly by early settlers in the spring-wheat belt because the region was far from markets and shipping ports. Settlers needed railroads to transport their crops to market, and to bring them lumber, manufactured goods, and other things which they needed.

3. Farm work in the moist continental parts of North America is highly mechanized because there is much level land which allows the use of machinery on the large farms. The rich harvests give the farmers money needed to buy machines.

4. About half of the people of the United States live in moist continental sections because climatic conditions are invigorating; minerals are present; manufacturing has developed; there are many large port cities; there are many transportation systems; and there is need for specialized farming. Your class may think of many more reasons.

5. The winter-wheat region has large farms on almost level land. Windmills are found on every farm, and trees are planted as windbreaks. Three-fourths of the land is left in grass while the other one-fourth is devoted to winter-wheat. The spring-wheat belt is farther north, and the farms are similar to those in the winter-wheat belt. The corn belt has very well-kept farms. The houses are usually painted white and the barns, red. In the fields, corn is rotated with soybeans, clover, and winter-wheat. There are many pigs, cattle, and horses which are fattened on the corn. In the dairy belt, fine dairy cows eat rich pasture, and fodder crops for winter feed grow in the fields. Mixed in with the dairy farms are truck and fruit farms. There is a section near the East Coast where truck farming is even more specialized.

6.

Manufacturing District	Type of Product
Southern New England, New York and Eastern Pennsylvania	Light manufactured goods Variety of heavy and light manufactured goods
Pittsburgh and Cleveland	Iron and steel manufacturing
Ohio-Indiana	Light manufacturing, flour milling, meat packing, vegetable canning
St. Louis	Transportation, livestock, and distribution center
Chicago-Milwaukee	Meat packing, iron and steel, agricultural implements and machines
Southern Michigan	Automobiles and other iron and steel products
Mohawk Valley and Lake Ontario	Electrical equipment, textiles, metal products, and industrial material

7. The midwestern farmer can store green feed in the silo for his livestock in winter. He puts green corn, soy beans, alfalfa, and other fodder crops in the silo.

Among Ourselves, p. 304

These questions can be answered best by having your students observe and compare the moist continental areas of the United States with their local community.

EVALUATION EXERCISES

To see whether your students can connect two ideas

Directions: Match each word in Column I with the word in Column II to which it is related.

✓

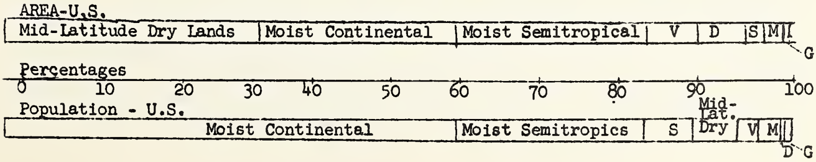
Column I

1. Gang harrow (e)
2. Silo (d)
3. Windbreak (a)
4. Yearling (c)
5. Combines (b)

Column II

a. Trees
b. Threshing
c. Cattle
d. Fodder
e. Plowing

To determine whether your students can use a graph giving percentages



Key:

V Varied mountain region
D Tropical dry land
S Sunny semitropical land
M Marine land
G Grassland

1. What climatic region in the U. S. covers the most area? (mid. latitude dry land)

2. What other two climatic regions also cover large areas? (moist continental and moist semitropical)

3. What percentage of the country's area does the moist continental climate cover? (27%)

4. Which climatic area has the most people? (moist continental)

5. What percentage of the total population lives in the moist continental region? (60%)

To Test Your Students' Understanding of the Industrial Centers

Directions: Match the items in Column I with the industrial centers in Column II.

Column I	Column II
1. Iron and Steel (c)	a. Chicago-Milwaukee
2. Light manufacturing (d)	b. Mohawk Valley-Lake Ontario
3. Railroad transportation center (a)	c. Pittsburgh-Cleveland
4. Automobiles (e)	d. Southern New England
5. Electrical equipment (b)	e. Southern Michigan
6. Varied industry and farming (f)	f. Ohio-Indiana

To See Whether Your Students Can recognize Distinctive Features of Various Regions in the Moist Continental Area

Directions: Read each description carefully. Determine where you are in the moist continental section of the United States.

1. I see a large city. It is located on the shore of a lake. A large boat is sailing past and there are miles and miles of railroad yards. Where am I? (Chicago)

2. I am standing in a field. The tractor is pulling a corn-picker. Nearby there is another field where cattle are feeding. Where am I? (Corn-Belt)

3. I am in a factory where the workers are making watches and clocks. The workers are very skillful. Where am I? (Southern New England)

4. I am standing where two rivers flow together to form another large one. There are many blast furnaces working all the time. Where am I? (Pittsburgh)

STUDENT READING LIST FOR CHAPTER 14

NONFICTION

**North America by Plane and Train, Aitchison, A., & Utley, M. (Bobbs). Interesting visits by plane and train to the corn and livestock belt, the meat packing center of Chicago, the iron ore districts and steel mills, the Northeast, the St. Lawrence region of Canada, and the great wheat fields of the Middle West are included on this trip around North America.

**Stories from the East and North, Cook, M. (Silver). The stories in this book tell how boys and girls live, work, and play in the north central and northeastern states.

*Life in America: The Great Plains, and The Midwest, and The Northeast, Havighurst, W., (Fideler, 1951). The author shows, explains, and pictures how each of these sections makes contributions to the total American scene.

**The Steel Book, Pryor, W., and Pryor, H. (Harcourt, 1935). Blast furnace, Bessemer converter, soaking pit, and rolling mill play their roles in the story of steel.

FICTION

***Winterbound, Bianco, M. (Viking, 1936). Being snowbound in the Connecticut hills is a frightening experience to four young people from the city.

**Granite Harbor, Bird, D., (MacMillan, 1944). A severe automobile accident brings Terry a new life in a small town on Lake Superior.

***Corn Gold Farm, Corey, P., (Morrow, 1948). Earl Blake and his father risk their fortune in trying to build up a rundown and eroded farmstead.

*Sugar Bush, Dankovszky, D. (Dana, D.),(Nelson, 1947). It took the Kolochecks six years' savings to make a change from blast furnaces to maple sugar.

***Jeff White, Young Guide, Dietz, L., (Little, 1951). Jeff White's love for wild life and knowledge of the country leads him to become game warden in the back country of Maine.

**Thimble Summer, Enright, E., (Rinehart, 1938). Finding a silver thimble in a dried up creek bed leads to an exciting summer on a Wisconsin farm.

***Year of the Locust, Erdman, L., (Dodd, 1947). Old Dade Kenzie had a strange effect on the Missouri farmer folk who came to know him.

**Timber, Fisher, A., (Dutton, 1955). Life in a Michigan lumber camp provides a teen-age boy with many thrills.

***Mounted Police Patrol, Haig-Brown, R. (Haig, R.) (Morrow, 1954). A boy makes a quick jump from the slums of Toronto to the life among the modern mounties on the Canadian prairies.

**Climb a Lofty Ladder, Havighurst, W., & Havighurst, M. (Winston, 1952). When his father returned to Sweden in 1890, Hans Bremer was left with a huge wheat farm on the vast Minnesota prairie.

*Shoo-fly Pie, Jordan, M., (Knopf, 1944). To be told she was "too young" was more than Debby could stand. Pennsylvania Dutch cooking became her answer.

*Quarry Adventure, Kingman, L., (Doubleday, 1951). A Finnish family attempts to solve the mystery of a strange quarry accident in Massachusetts.

*Corn Farm Boy, Lenski, L., (Lippincott, 1954). Even the daily routines on an Iowa farm can become exciting.

*Prairie School, Lenski, L., (Lippincott, 1951). A great blizzard sweeping across South Dakota isolates the prairie school which Darrell and Dolores attend on horseback.

**High Harvest, Low, E., (Harcourt, 1948). Fifteen-year-old Suzanne, inspired by her love for her Vermont mountain home, fights hard to save her land from seizure.

***Blueberry Mountain, Meader, S., (Harcourt, 1941). Two boys from the Pocono Mountains discover there is more profit in growing blueberries than picking them wild.

***Jeb Ellis of Christmas Bay, Moore, R., (Morrow, 1952). Jeb is forced to become the head fisherman in his household after his father drowns.

*Midnight and Jeremiah, North, S., (Winston, 1943). Jeremiah is determined that his clumsy little black lamb will be a prize winner at the Indiana State Fair.

***Strong Wings, Robinson, M., (Random House, 1951). Rugged living along the Maine coast is a new experience to a city family, especially when young love is involved.

**Zuska of the Burning Hills, Seckar, A., (Oxford, 1952). Zuska solves a mystery and brings happiness to her family in a mining town in West Virginia.

**On the Banks of Plum Creek, Wilder, L., (Harper, 1937). Fire, grasshoppers, and blizzards add to the adventures in the Minnesota wheat country of sixty years ago.

***A Long Time Coming, Whitney, P., (McKay, 1954). Christie Allard gets herself involved in a clash between immigrant workers employed in her father's plant and the people of a small Midwestern town.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 14

An Industrial Lake Port (Buffalo, N.Y.), 1949, (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Industrial centers tend to develop where there is a natural focus of trade routes.

Cattle and the Corn Belt (Midwest U.S.A.), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 49 fr, #65). The people who live and work on the vast areas of level land produce large quantities of food for the rest of the world.

Corn Farmer, 1940 (mp, b&w, sound, 11 min, #23). Problems and methods of the Iowa corn grower, exemplified by the life of a typical corn belt family.

Geography of the Middle Atlantic States, 1953 (mp, color, b&w, sound, 10 min, #20). Carefully selected scenes capture the human factor in the complex, dynamic life in this region.

Geography of New England, 1951 (mp, color, b&w, sound, 10 min, #20). Shows the effect of glaciation, the development of specialized industries, the distribution of the population as well as the present-day economy.

How We Get Our Coal, 1950 (fs, b&w, 41 fr, #69). Follows the story of coal from its mining to its sale to the consumer.

Industrial Provinces of Canada, 1943 (mp, b&w, sound, 11 min, #23). Shows the relationship of this region to the rest of Canada, to the United States, and to the rest of the world.

Iron and Steel, 1952 (fs, color, 23 fr, #24). Traces the production of iron from the mines, to the blast furnace, to the finished steel products.

Iron Ore Mining, 1950 (mp, color, b&w, sound, 13 min, #2). Open-pit mining in Minnesota and a trip through the Lakes to the blast furnaces and steel mills.

Life in America: Regional Geography, 1953 (set of 6 fs, b&w, #37). "New England," 62 fr; "The Northeast," 64 fr; "The Midwest," 72 fr; "Great Plains," 72 fr.

Living in a Metropolis (Greater New York), 1948 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Shows the location, different sections of the city, shipping and other transportation facilities, the culture, and the people.

Maine Harbor Town (U.S.A.: Northern New England), 1950 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Some of the means of making a living in a rugged region where the soil is poor and the growing season is short.

Maritime Provinces of Canada, 1943 (mp, b&w, sound, 11 min, #23). Portrays the people of the region and their fishing, lumbering, farming, mining, smelting and commerce.

Middle States, 1942 (mp, b&w, sound, 11 min, #23). An overview of man's use of resources, agriculture, and industrial projects in the "Breadbasket Area." Relationships are noted with reference to other regions.

Middle West, 1953 (set of 4 fs, color, #58). "The Corn Belt," "East and South of the Corn Belt," "West and North of the Corn Belt," and "City People of the Middle West."

Mississippi River (Upper River), 1948 (mp, color, b&w, sound, 14 min, #2). Traces the upper course of the river and its use by man. Shows the operation of the dams and locks built to improve navigation.

Northeastern States, 1942 (mp, b&w, sound, 11 min, #23). Features of the land, people, and natural resources, textiles, clothing, and heavy industry are shown. The interdependence with other regions is stressed.

Northeastern United States, 1953 (set of 4 fs, color, #58). "Living in New England," "Five Great Cities," "Valley Regions of the Northeast," "Where East and South Meet."

Out of the Earth, 1938 (mp, b&w, sound, 40 min, #42). The story of coal from prehistoric times to the mining and burning.

Steel Town, 1945 (mp, b&w, sound, 17 min, #65). Youngstown, Ohio: the blast furnaces, steel mills, and lives of the steel workers.

Then and Now in the United States, 1951-52 (set of 18 fs, color, #57). Uses past events and physical environment to explain the present in "New England," "Great Lakes," "Corn Belt," "Midwest Dairy," and "Great Plains."

U.S. Regional Geography, 1952 (set of 10 fs, color, 45 fr, #69). "The Central Plains," "The Great Lakes Region," "The Great Plains," "The Northeast."

Wheat Farmer, 1938 (mp, b&w, sound, 11 min, #23). Portrays the life of a wheat farmer and his family in a typical Midwestern area. The life on the farm, the planting, harvesting, and the selling of winter wheat are shown.

Wheat: Its Growth, Transportation and Marketing, 1955 (mp, color, sound, 28 min, #56). A documentary on wheat planting, growing, harvesting, testing, grading, and selling.

CHAPTER 15: THE HEART OF EURASIA

YOUR OWN LOOK AHEAD INTO CHAPTER 15

Most of the land in the moist continental region of central Eurasia is locked behind the "Iron Curtain" and under the control of the Soviet Union. It is important that your students realize the necessity for knowing something about these lands. Many things for which the Soviet Union stands are in direct opposition to the ideals which we hold high in this country. Just as a football coach studies the plays and tactics of the opposition, it is necessary for us to know as much as possible about these vast areas whose government is so unlike ours.

It is difficult to get information through the "Iron Curtain," but mahy people study the newspapers, magazines, and books that do get through. From these sources and with the knowledge that many geographic factors are difficult to change and that people who have followed a pattern of living will not alter this pattern overnight, information is pieced together about these countries which are shut off from the rest of the world.

Chapter 15 is divided into a number of sections:

1. "Let's Look at Maps," pp. 306-07.

2. "The Heartland of Sweden," pp. 307-11, tells how farming, mining, lumbering, manufacturing, and commerce make the moist continental section the most productive part of Sweden.

3. "Free Lands and Communist Lands," pp. 311-13, explains many of the basic differences between free countries and those located behind the "Iron Curtain."

4. "The Lands of Central Europe," pp. 313-16, describes how the lives of the Soviet farmers have been changed because of the formation of state and collective farms.

5. "Farming in the Soviet Union," pp. 316-17, presents a description of farmlands and crops in central Russia and on the plains of western Siberia.

6. "Industrial Districts and Cities," pp. 317-19, examines the Kuznetsk, Ural, and Moscow industrial areas of the U.S.S.R. Moscow, the capital city, forms the heart of the Soviet Union, and Leningrad is the most important seaport.

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FOR YOUR OWN READING

You may want to add to your background knowledge by referring to the following books.

George D. Hubbard, The Geography of Europe, pp. 603-749, "Central States with Transitional Climate'; pp. 749-802, "Lower Danube States."
Norman J. G. Pounds, Europe and the Mediterranean, Ch. 16-22.
James S. Gregory and D. W. Shave, The U.S.S.R., Ch. 14 and 18.
Demitri Shimkin, Minerals, A Key to Soviet Power.

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MAJOR QUESTIONS

As your class reads this chapter, you may want to point out the "Major Questions" which are evident. The two "Major Questions" are both related to the "Primary Objective" which deals with acquainting the students with different ways of life upon the earth. The supporting information for answering these questions is furnished for your use in the classroom.

Primary Objective:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

→

Major Question #1:
How does the Soviet Union control agriculture and industry behind the "Iron Curtain"?

Agriculture	Industry
State Farms 1. Government owns the land. 2. Workers receive wages but none of the profits. 3. A manager is appointed by the government. 4. Each worker has a specific job. 5. Government decides everything.	Kuznetsk District (Central Siberia) 1. Rich deposits of coal and iron ore. 2. Products include textiles, chemicals, mining equipment, machine tools, farm equipment, and locomotives. 3. Chief cities: Tomsk, Stalinsk, and Novosibirsk.
Collective Farms 1. People own the land. 2. The farms are joined together and operated as a large farm. 3. A manager or committee assigns each person his job. 4. Government buys and sets prices of crops. 5. Farmers have a few acres for own use.	Ural District 1. Rich deposits of coal and iron. 2. This district was used during the German invasion in World War II. Moscow District 1. Good transportation. 2. Central location. 3. Hydroelectricity and low-grade coal. 4. Variety of manufactured goods.
Crops 1. Central Europe: corn, winter-wheat, and potatoes. 2. Central Russia: flax, spring-wheat, rye, and livestock. 3. Western Siberia: spring-wheat, dairy products, and beef.	Central Europe 1. Iron ore and coal in mountains of Germany, Austria, and Czechoslovakia. 2. Some flour milling and sugar refining.

Primary Objective:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

→

Major Question #2:
Why is Sweden's moist continental area called the "Heartland of Sweden"?

Activities

Farming	Lumbering
1. Summers are short and cool. 2. Farms are small. 3. Crops include hay, oats, rye, barley, wheat, beets, turnips, potatoes, and other root crops.	1. Forests still cover much of the land. 2. One-third of the people engage in lumbering. 3. Little of the wood is wasted. 4. Products include lumber, paper, matches, tar, pitch, alcohol, and acetone.
Dairying 1. Climate favors growth of pasture. 2. Hay grows well. 3. There is a good market in Stockholm and other cities near the Baltic Sea.	Industries 1. Swift rivers furnish electricity. 2. Near rich deposits of iron ore. 3. Products include high-grade steel tools, ball bearings, and other special products.

SUGGESTIONS FOR TEACHING

The reading material in this chapter is divided into short sections. These sections with their "Checking Up" questions make good daily assignments for your *reluctant students. The **average and ***advanced students may be able to read more than one section in an assignment. Some new ideas will be included to aid you in the preparation of lesson plans, and you might want to adapt some of the suggestions that were given in previous chapters.

Arousing Interest in the Chapter

1. Interest in a study of "The Heart of Eurasia" may be stimulated by discussing a current event. Many news items are available. Some sources for these items include current newspapers, magazines, student publications, radio broadcasts, newsreels, and personal experience.

Many teachers find it advisable to select the current events themselves. The current events you choose for this chapter can be glued to construction paper in order to give them a backing and protect them from tearing. Several days in advance, select students to take the articles home to prepare a short oral report.

On the day selected for the introduction of the chapter, you can have these students tell the class about the current events. The students giving the reports should be able to locate the places where the events occurred on the wall maps. They may also want to explain why the event is important.

The class discussion which follows the report can be initiated by questions such as, "Why do you think this event happened?" "What people were involved in the event?" "Does this current event affect us?" "What are the geographic factors involved in the current event ?" "What else do we know about the places where these events occured?" "What are some of the things we should know about these places?"

2. Through the movies and television, your students will already have some ideas about the "Iron Curtain." These impressions can be used in a class discussion. As the class tells about some of the things they have seen and heard in connection with Communism, you might focus their thinking by asking,"How do we know what goes on behind the 'Iron Curtain'?"

Students will be quick to know about spies and underworld intrigue, but you can also point out how experts in our government and in our universities monitor all radio broadcasts and read all printed material that does get through the "Curtain." To this information, geographers add their knowledge of the climate, topography, and people. You can tell your class that much of the material in their textbooks about these countries was pieced together in this manner.

3. Students who have backgrounds connected with any of the moist continental countries of Eurasia can demonstrate costumes, sing songs, or tell something about the old customs of these countries.

Let's Look at Maps (pp. 306-07). In the unit introduction on pp. 305-06, your students are flown to Stockholm, Sweden, by their imaginary airplane. In the map study, they take a closer look at Sweden and the other areas in central Eurasia which have moist continental climate. Many of the map skills are reviewed and reinforced.

Map Skills

Skills	Review
Direction	N,S,E,W Latitude
Distance	Scale--recognition of differences
Location	Latitude
Symbols	Political boundaries, continents, seas, rivers, cities, plains, mountains
Legend	Different hatching to indicate moist continental regions (short and long summers) Shading to indicate population density and rainfall (relative differences) Shading to indicate population density and rainfall (people per sq. mi. and inches)
Comparison & Inference	Latitude of two areas compared Rainfall of two areas compared Population densities of two areas compared

Suggested Answers for "Let's Look at Maps."

1. The country of Hungary lies entirely within the moist continental region. Parts of Sweden, Finland, Poland, Germany, Czechoslovakia, Italy, Austria, Yugoslavia, Bulgaria, Rumania, and the U.S.S.R. lie in this region also.

2. The moist continental climate of Eurasia extends from 42°N. to 61°N. latitude. In North America, the region extends from 35°N. to 54°N. latitude. Poland, Czechoslovakia, Austria, Germany, Italy, Yugoslavia, Hungary, Rumania, and Bulgaria have long summers. Sweden, Finland, and the U.S.S.R. have short summers.

3. The Vistula River flows through Poland. The Rhine River flows through Switzerland, Germany, and the Netherlands. The Oder River flows through Czechoslovakia and Poland. The Danube River flows through Germany, Austria, Hungary, Yugoslavia, Bulgaria, and Rumania. The Volga River flows through the U.S.S.R.

4. Stockholm is located in Sweden; Helsinki in Finland; Vienna in Austria; Belgrade in Yugoslavia; Warsaw in Poland; Moscow in the U.S.S.R.; Leningrad in the U.S.S.R.

5. The surface of the moist continental region of Sweden looks flat. The Danube River flows through the plains of Hungary and Rumania.

6. The directions point out the area that is usually included in Central Europe.

7. The Ural Mountains and Ural River together with Caucasus Mountains are pointed out as the boundary between Europe and Asia.

8. Rainfall is heaviest in the eastern and southern sections of the moist/continental area. The area with long summers gets more rainfall than the areas with short summers. The average annual rainfall for the European area is between 20"-80". The average annual rainfall for the Asian area is between 10"-20". The European area receives the greatest amount of annual rainfall.

9. The European section of the moist continental region is the most densely populated. The moist continental area of the Soviet Union is not as densely populated as Central Europe.

Reading the Chapter (pp. 307-19). As your class reads the text material in this chapter, you might want to formulate some questions in addition to the "Major Questions," which your students can answer and about which they can form opinions. Some big questions which are answered in the chapter might include:

1. Why has the moist continental section of Sweden been called the "heartland" of that country? (pp. 307-11)

2. On which side of the "Iron Curtain" would you prefer to live? Give reasons for your answer. (pp. 311-13).

3. How have the Communists organized agriculture in the countries they control? (p. 314)

4. How is agriculture in Central Europe similar to agriculture in the moist continental section of the United States? (p. 315)

5. How has farming been improved in the Soviet Union? (pp. 316-17)

6. What has helped industrial growth in the U.S.S.R.? (pp. 317-18)

Proceeding with Your *Reluctant Students. Your *reluctant students might examine one of the questions stated above each day. After they have read the material in the textbook and answered the "Checking Up" questions related to each section, they can prepare an outline of the material which they think answers each question. When the outlines have been completed, this group can write a composition using only their outlines as reference. The composition should give the answers to the questions along with your students' personal opinions and ideas.

This *reluctant group should be encouraged to write neatly and to be careful in their sentence structure. They should make sure that all thoughts are in complete sentences and that each sentence starts with a capital letter and ends with a period. Spelling can be checked in a dictionary. Try to establish a dictionary habit or have your students check spellingby referring to the textbook.

These compositions need not be long. The chief purpose is to give experience in organizing factual material,in critical thinking, and in writing down information in a clear and logical manner.

This *reluctant group can also do additional work to enrich their learning.

1. Fill in countries, cities, and water bodies on the outline map of moist continental Eurasia.

2. Draw cartoons which show the differences between "Iron Curtain" and free countries.

3. Draw pictures of villages, houses, and native costumes of various groups of people in this area.

4. Make a diarama or sand table model of a state farm or a collective farm. The model might show crops, machinery, and workers' houses.

5. Read supplementary material which is available in the library. The "Student Reading List for Chapter 15" on p. 22 of this booklet will help you select material suitable for this group.

Proceeding with Your **Average Students. The **average group can also follow the procedure suggested above for reading and writing their compositions. These **average students, however, will probably be able to do the work more quickly. This group should watch their sentence structure, spelling, and punctuation. In addition, they can try to add some descriptive adjectives to make their writing more colorful and exact.

The enrichment work for the **average group might include:

1. Select any of the activities listed for the *reluctant group.
2. Prepare special reports on such topics as: life in Stockholm, facts about the Danube River, Radio Free Europe, the Voice of America, and the Po River Valley in Italy.
3. Draw posters about "Iron Curtain" countries.
4. Make models of farming villages such as those described on pp. 313-14.
5. Make flash cards containing names of important places.

Proceeding with Your ***Advanced Students. Your ***advanced students can organize and write their reports in much the same manner as the other two groups. They, too, should be careful to use correct sentence structure, spelling, punctuation, and use of adjectives. In addition, these students might strive for variety in their types of sentences.

Some enrichment activities which this group might find interesting could include:

1. Select any of the activities listed for the other groups.
2. Collect current events and newspaper cartoons about Communist countries. These can be mounted and displayed on the bulletin board with a brief explanation about each item.
3. Prepare special reports on the history of Communism in Russia, details about Communistic governments, use of rivers in moist continental Europe, Russia's search for a warm-water port, and governments of free nations in Europe.
4. Make a diarama of a scene in Western Siberia showing flat plains, grain fields, livestock, grain elevator, and railroad.
5. Construct graphs using the statistical data found on pp. 432, 433, and 436.

Reviewing the Chapter. To conclude the study of this chapter, you might start a discussion on the basic differences between Communistic governments and democracy.

The "Words to Understand," "Questions to Think About," and "We and They" on p. 319 will help your students to organize their thinking about "The Heart of Eurasia."

SUGGESTED ANSWERS FOR CHAPTER 15

Checking Up, p. 311

1. The moist continental section of Sweden has short, cool summers. The farmers must raise crops that grow well in such a climate. They specialize in raising hay, oats, rye, barley, and some wheat. They also raise vegetables that mature quickly such as beets, turnips, potatoes, and other root crops. The farms are small because there is not much land available for farming, and the farmer and his family must work the farm with little machinery.
2. The swift rivers which flow down the mountains are Sweden's source of electricity. The power is used in manufacturing wood products, in mining, in the chemical industry, and in the iron and steel industry.
3. Four natural resources of Sweden are iron ore, forests, rivers for hydroelectric power, and good farmland.
4. Sweden is a popular winter resort land because the winters are long and cold. A great deal of snow falls. In the mountains, the snow makes skiing and tobogganing possible. The frozen lakes make sail-skating and ice-yachting possible.

Checking Up, p. 313

1. People in free lands are able to choose the work they want to do and to work hard to improve their standards of living. They are free to vote for their representatives in government, to criticize the government, and to work to improve the government. The people can express their opinions freely and worship as they please. They have to obey laws, but usually they have a part in making the laws. There is a police force in free countries to maintain the law, not to spy and pry into people's lives.

2. Your students can probably think of many answers and will list many things they would not enjoy in Communist countries.

3. In moist continental Europe, East Germany, Poland, Czechoslovakia, Hungary, and Bulgaria are under Communist control. Yugoslavia is Communistic but independent of the Soviet Union. Italy, Switzerland, Sweden, and Austria are not under Communist control.

Checking Up, p. 316

1. After World War II, many of the small farms of Central Europe were taken over by the Soviet government. The government turned them into huge state and collective farms.

2. State farms are more like agricultural factories because the workers are paid a wage, everyone has a specific job to do, and the manager decides everything.

3. On a collective farm, the people own their own land, but they are told by the government what crops to plant. The government buys the crops at prices which the government wants to pay. A manager or a committee tells the farmers what to plant and what jobs are to be done. If a farmer doesn't join a collective farm, he is unable to buy machinery, feed, or seed. Thus, he is forced to join the collective farm in order to eat.

4. Two leading mineral resources of Central Europe are iron ore and coal. Iron and steel, flour milling, and sugar refining are carried on in modern factories.

Checking Up, p. 317

1. The farmlands of central Russia are like those in North America because they are on a vast plain. Much machinery like tractors, seeders, gang plows, harvesters, and combines are used. The farms are similar to ours because for nearly 40 years, the Communist government has been trying to follow the example of American farming efficiency.

2. Long, cold winters, short summers, and generally low rainfall limit the farmer's choice of crops in this region.

3. Spring wheat is the main cash crop of the Siberian plain. Western Siberia exports butter and meat to other parts of the U.S.S.R.

Checking Up, p. 319

1. Kuznetsk, Ural, and Moscow are the three great industrial districts of the Soviet Union's moist continental region.

2. Deposits of high-grade coal and iron ore have made possible the development of industry in these districts.

3. Flour mills, sugar beet refineries, and factories for making clothing, felt boots, and wood products depend on agriculture more than they do on mineral resources.

4. Railroads, water power, coal, and a central location have helped to make Moscow the heart of the Soviet Union. Since it is the capital, the government is centered here. Leningrad has several advantages of location. It has a harbor on the Baltic Sea, waterways connecting it with the interior, and canals connecting it with the Volga River and the White Sea.

Questions to Think About, p. 319

1. Central Sweden is called the "heartland" of Sweden because it is the most prosperous section of the country. Most of the people live in this region. It is the most important farming, mining, lumbering, manufacturing, and commercial area in Sweden.

2. Forestry is important in Sweden because one-third of the people depend upon the forest and forest industries. Besides lumber, railroad ties, fuel, wood pulp, and matches, the forests yield tar, pitch, resin, alcohol, acetone, and many

other useful products.

3. Some of the richest deposits of iron ore in the world are found in central Sweden. The Swedes make high-grade steel for tools, ball bearings, and other special products.

4. "Iron Curtain" is a term which explains the policy of keeping secrets within a country, and all communication to and from the country is carefully censored.

5. On a Communist state farm, the government owns the land, pays the workers a wage, assigns them their jobs, and tells what crops are to be grown. On a collective farm, the farmer owns the land but he must join with a number of other farmers in the "collective" and plant crops that the government wants. The government then gives him the price it wants to pay for the crops. The farmers have a little land which they can devote to their own use.

6. In southeastern Germany, houses in the villages stand apart in their own gardens, and almost every cottage window contains a box of brilliant flowers. In Hungary, the farm villages run for miles along a single street. The houses are built of sod or adobe walls and have thatched roofs. Whitewashed walls and brightly colored doors make these houses attractive. In Bulgaria, the villages are small with a common pastureland, usually located on poorer soil. All good land is planted in grain. In each community, life goes on much as it did hundreds of years ago. Ways of building houses and towns have been handed down from father to son.

7. The Kuznetsk District has rich deposits of coal and iron. It also has textile, chemical, tool making, farming equipment, and machinery industries. The Ural District also has a supply of coal and iron ore. This region developed rapidly during World War II when much of the Soviet industry was moved into the region to escape the invading German Army. The Moscow District is near a navigable river which also produces hydroelectric power. Low-grade coal is found nearby. A good transportation system by rail, river, and canal developed to bring in many raw materials from surrounding regions for manufacturing or distribution. The Moscow District contains a great variety of industry, producing automobiles, farm equipment, ball bearings, textiles, locomotives, electrical equipment, and many other items.

We and They, p. 319

By comparing your local community with the "Heart of Eurasia," your class can answer the questions in this exercise.

EVALUATION EXERCISES

To Check on Your Students Understanding of Factual Information

Directions: Can you build the pyramid? Find the proper answer that will exactly fill the spaces in front of each statement.

3 1. Number of important industrial districts in U.S.S.R.

P o 2. Name of a river in northern Italy

r y e 3. Crop grown on farms in central Russia

U S S R 4. Abbreviation for Soviet Union

V o l g a 5. Large river in the Soviet Union

S w e d e n 6. Free country with moist continental climate

To See Whether Your Students Understand Agriculture in the U.S.S.R.

Directions: Fill in each blank in the paragraph below. Select your answers from the following alphabetical list.

city
collective
crops
dictates
forbids
horses
intensive
livestock
machines
method
people
prices
profit
state
Sweden
U.S.S.R.

Agriculture in Communistic countries is practiced on (state) and (collective) farms. The government (dictates) all farming procedures. The (people) on these farms have nothing to say about what (crops) are planted, to whom the crops are sold, the (prices) to be charged, or the (method) of farming to be used. (Machines) are used on the level land because the (U.S.S.R.) is trying to obtain the same results as those obtained by farmers in the United States.

To Check on Various Aspects of Life in Central Eurasia

Directions: Place an x before the number of any statement that is false in the following list. Change words in the false statements to make them true.

(x) 1. The Kuznetsk Industrial District is in Sweden. (in U.S.S.R.)

2. The "heartland" of Sweden has moist continental climate.

3. European Russia has no warm-water ocean port.

(x) 4. Farmers own the land on a state farm. (government owns land)

(x) 5. The Alps are part of the boundary between Asia and Europe. (Ural or Cacasus Mountains)

(x) 6. Leningrad is the chief port of Poland. (of U.S.S.R.)

7. The Danube River empties into the Black Sea.

To Determine Whether Your Students Know Some of the Communist and Free Countries of Europe

Directions: In the following list of countries, place an F after each free country and a C after each Communist-controlled country.

Sweden (F)
Poland (C)
Yugoslavia (C)
Switzerland (F)
West Germany (F)
Czechoslovakia (C)
Rumania (C)
Bulgaria (C)
Austria (F)
Hungary (C)
U.S.S.R. (C)
East Germany (C)

STUDENT READING LIST FOR CHAPTER 15

NON-FICTION

**Europe, The Great Trader, Aitchison, A. (Bobbs). A series of letters written by a visitor to Russia, a trip down the Volga, and a visit to a state farm describe the Soviet Union before World War II.

**The Land and People of Sweden, Ashley, G. (Lippincott, 1951). The regions around Stockholm and the industry of Sweden are included in this account.

**The Land of the Polish People, Kelly, E. (Lippincott, 1943). An account of the land and Polish people at work and play before the days of the Iron Curtain.

**The Land of the Russian People, Nazaroff, A. (Lippincott, 1944). Sections on Moscow and Leningrad show the industrial development of the Soviet Union.

**Let's Read About Russia, Shapovalov, M. (Fideler, 1950). Collective farms, Russian industry, home life, school and recreation are pictured as part of the Soviet way of life.

FICTION

*Good Master, Seredy, K. (Viking, 1935). Headstrong Kate had to be tamed like a colt when she went to live on a farm on the plains of Hungary.

*Singing Tree, Seredy, K. (Viking, 1939). Life on the Hungarian Plains changed after the head of the family went off to war.

*Philomena, Seredy, K. (Viking, 1955). A Bohemian peasant girl has an adventure on her first visit to Prague.

*White Birds Island, Skrebitskii, G. (Knopf, 1948). Two Russian lads have an exciting night in the vast swampland near their home.

***Dobry, Shannon, M. (Viking, 1934). A Bulgarian peasant boy desires to become a sculptor, but the way is hard and finances are limited.

*The Treasure Trove of the Sun, Prishvin, M. (Viking, 1952). Anna and Peterkin were only hunting for cranberries when they got lost in the peat bogs near their Russian village.

*Lars and Lisa in Sweden, Vreeland A. (Knopf, 1948). An American artist helps a Swedish boy expand his interest in art.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 15

Crack In The Iron Curtain, 1953 (mp, color, sound, 27 min, #46). A tour of Yugoslavia, showing the progress made toward becoming a democratic nation.

Czechoslovakia, 1951 (fs, b&w, 33 fr, #69). The every-day life of a farm family in central Europe, stressing the home and family life.

Farms and Towns of Slovakia (Danube River Country), 1949 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). The people of this area who live in a mountainous land remote from the highways of communication have maintained conservative traditions.

Inside Russia (Moscow and Leningrad), 1949 (mp, b&w, silent, 10 min, #23). Street scenes in these Soviet cities showing markets, housing projects, and industries.

Inside Russia (Peasant Life), 1949 (mp, b&w, silent, 10 min, #23). Pictures the life of the independent Russian farmer as well as state and collective farms. Schools are provided to teach agriculture to both adults and children.

Mary Visits Poland, 1946 (mp, b&w, sound, 10 min, #45). An American girl describes her visit to the schools, farms, and social events in Poland.

Peoples of the Soviet Union, 1946 (Rev., 1952) (mp, b&w, sound, 22 min, #45). Shows the many racial groups that comprise the Soviet Union.

Ports of Industrial Scandinavia (Sweden's East Coast), 1949 (mp, b&w,sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). The people of the east coast of Sweden live comfortably because they make maximum use of their natural environment.

Russia, 1947 (fs, b&w, 55 fr, #37). A history of the development of the Soviet Union as well as a cross-section view of the country, its transportation, collective farms, and education.

Yugoslavia, 1955 (set of 3 fs, color, #25). "Yugoslavia, Balkan Bastion," "The Yugoslavian People and Their Customs," "A Scenic Trip Through Yugoslavia."

Yugoslavia Today (fs, b&w, 65 fr, #6). Illustrates the history and the economic and social life of the people. Explains Yugoslavia's relations with the United States and the United Nations. (This filmstrip may be retained permanently.)

FEATURE: BITTER LANDS OF THE FAR EAST (pp. 320-23)

Most of the moist continental lands in far eastern Asia are under Communist control. In North China, the farms are small and the farmers are poor. This area has been called a land of "flood and famine." There is famine where the summer rainfall is under 25", and this occurs frequently. There are many floods when the Yellow River, swollen by melting snow and heavy rains in the mountains, sweeps over the flat delta plain.

You can explain to your class that living conditions are better in Manchuria; but the short,cool summer limits the kinds of crops which can be grown. In North China and Manchuria, the Communists have organized some of the land into state and collective farms.

In eastern Siberia, huge state and collective farms use modern machinery to harvest the spring wheat and soybeans. Vladivostok, the chief city, is an important trading and military center.

FOR YOUR OWN READING

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The following books contain information about the lands in the Far East.

George B. Cressey, Asia's Lands and Peoples, Ch. 20,"Regions of Soviet Siberia."
James F. Gregory and D. W. Shave, The U.S.S.R., Ch. 10, "The Far East."

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MAJOR QUESTION

The "Major Question" suggested for this feature encourages your students to think about ways of life in the Communist-controlled moist continental regions of the Far East.

Primary Objective:		Major Question:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.	→	How do the people live in the moist continental sections of Communistic eastern Asia?

North China	Manchuria	Eastern Siberia
1. Dependent on rainfall. 2. Farms are small. 3. People are poor. 4. Some state and collective farms. 5. Crops include millet, peanuts, sweet potatoes, sesame, and kaoliang. 6. Chief cities: Peiping and Tientsin.	1. Rich in minerals. 2. Has fertile soil. 3. Farms are small. 4. Some state and collective farms. 5. Cold winters and short summers limit crops. 6. Crops include kaoliang, corn, spring wheat, millet, and soybeans.	1. Has rich soil. 2. Large collective and state farms. 3. Machinery is used. 4. Crops include spring wheat, soybeans, oats, potatoes, and vegetables. 5. Chief city: Vladivostock.

SUGGESTIONS FOR TEACHING

A statement such as "millions of Chinese have never eaten rice" might be used to create interest in this feature. You can have your class discuss the statement and try to guess some reasons for it. The discussion will lead very naturally into the reading of pp. 320-23 and a review of pp. 227-33 to check for differences between North and South China.

No map study has been included in the text for this feature, but you want to conduct your own, using the map on p. 321. Have your students determine the latitude of the moist continental area and compare it with the latitude of moist continental North America and central Eurasia. Students can trace the courses of the Amur and Hwang Rivers. They can find the large delta of the Hwang River and the broad valley in central Manchuria. Finally, the cities of Peiping, Tientsin, Mukden, Harbin, Dairen, Seoul, and Vladivostok can be located.

You may want to explain to your class why the floods of the Hwang River are so dangerous. You can explain that this river carries a great deal of silt. By depositing the silt at its mouth, the river has built a huge delta. The river also deposits silt in its own river bed. Early in history, the people began to build dikes along the river; but more and more silt was dropped in the river bed until the river was higher than the dikes. As a result, the people built higher and higher dikes. This process continued until today the river actually flows above the surrounding land. When one of the dikes breaks, the river water flows down to the flat level land on either side.

The "Checking Up" questions on p. 323 help to point out many of the geographic relationships evident in this feature. You may want to stress the following words with your class: k'ang, sesame, kaoliang, Manchus and curd.

SUGGESTED ANSWERS FOR FEATURE (pp. 320-23)

Checking Up, p. 323

1. Americans usually call the Hwang River the "Yellow River" because the yellow dust of North China makes the river muddy.

2. The soil of North China is productive if 25 inches of rain fall between May and September. When too little rain comes, a famine results.

3. Three nations have fought over Manchuria because it is a land of great mineral resources, especially coal and iron. It has fertile, easily worked soil.

4. Manchuria has been called the Soybean Empire because soybeans are its most important cash crop. These beans are used to make flour, a tangy sauce, cooking oil, and curd. Industries turn the soybeans into paint, explosives, soaps, and plastics.

5. In North China, the farms are very small and all the labor is done by hand. In eastern Siberia, collective and state farms are large, and much modern machinery is used. Vladivostok is an important city because its location on the Sea of Japan makes it an important port. The city is the closest Soviet military base to North America.

STUDENT READING LIST FOR FEATURE (pp. 320-23)

NONFICTION

**Asia: The Great Continent, Whittemore, K., (Bobbs). An exciting journey across Manchuria, letters from Peiping, and the story of "China's Sorrow are contained in this book.

FICTION

**Su-mei's Golden Year, Bro, M. (Doubleday, 1950). Su-mei's life depended on saving the wheat crop. What could a girl do to prevent famine from engulfing her family, friends, and Chinese people?

*Pong Choolie, You Rascal! Crockett, L. (Holt, 1951). A K rean boy who had seen life in North Korea with his Communist father feared the treachery of the invading Americans.

***Keys of the Kingdom, Cronin, A. (Little, 1941). After failing as a curate in Scotland, Francis Chisholm combats indifference, famine, plague, bandits, and civil war in his lonely Chinese mission.

**Red Chair Waits, Huggins, A. (Westminster, 1948). A pre-arranged Chinese marriage horrified Chun Shu-Lan when the marriage became a reality.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 320-23)

Korean Backgrounds, 1951 (mp, b&w, sound, 17 min, #40). Modern and ancient ways of life exist side by side despite influences of the Chinese and Japanese.

Peiping Family, 1948 (mp, b&w, sound, 21 min, #45). A middle-class Chinese family struggles to provide for the necessities of life in the ancient city of Peiping.

Tientsin: Gateway to North China, 1950 (mp, color, sound, 10 min, #4). Shows the efforts of China's second-largest seaport city to improve her condition and expand industrialization.

REVIEWING UNIT SEVEN

PLANNING THE REVIEW

In adding up and organizing all of the important ideas that are included in Unit Seven, you may want to use some of the aids listed in "Reviewing Unit Seven" on pp. 323-24. "A Broader View" points out many of the advantages in both natural and cultural environments which the people who live in moist continental regions enjoy. It also points out the consequences of destroying human freedom and urges each individual to do his part in protecting our natural resources so that we can continue to be strong and maintain our individual liberties.

ADDING UP IDEAS

As you guide your class in their review, you might have them recall information that applies to all of the moist continental regions of the world. This information might include some of the following ideas:

1. The moist continental climate has four seasons, each one with distinctive weather conditions.

2. In moist continental regions, weather is more important than climate in its immediate influence on man's activities.

3. In moist continental regions, sudden changes of weather come every few days.

4. Summers are hot and winters range from cold to very cold. Winters also last from four to five months.

5. The average yearly precipitation varies from 20" in the interior of the continents to 50" near the coast.

6. More than half of the yearly rainfall usually comes in the late spring and early summer. Much of it comes with summer thunderstorms.

7. The moist continental climate is not an easy climate in which to live because people must work hard and plan ahead in order to have sufficient food, warm clothing, and well-built shelter for the winters.

8. The world's most productive manufacturing region is in the North American

moist continental region. The European moist continental region has smaller but very important manufacturing districts.

9. The moist continental region contains some of the greatest food-producing areas of the world.

10. The farmers of the North American moist continental region produce enormous quantities of food because:

a. They have large areas of level land with rich soil.
b. The summer rainfall is dependable.
c. The growing season is from 100-180 days.
d. Transportation facilities are good.
e. Farmers have power machines.
f. Farmers have a large home market.
g. Farmers rotate crops.
h. Farmers use seed developed to resist disease and suited to certain soil and climatic conditions.

11. Manufacturing has reached a high point of development, partly because:

a. The people have used the accumulated knowledge gained in other regions.
b. Coal and other power resources are available.
c. Large iron ore deposits are found in or near these regions.

SUGGESTED ANSWERS FOR "QUESTIONS TO THINK ABOUT," p. 324

1. It costs more to live comfortably in moist continental regions because it is necessary to build better houses which are expensive; more clothes are required; houses, factories, office buildings, etc., must be heated about eight or nine months of the year; keeping railroads running in winter and keeping roads clear for automobiles involves high costs; building roads and highways is more expensive than in other regions.

2. People in early times had a difficult time in the moist continental regions because they did not know how to build efficient houses, stoves, and other things needed to create "indoor climates" in which people could live comfortably.

3. Fireplaces, stoves, furnaces, and central heating plants have enabled man to live comfortably through severe winters. Man has invented plows with steel tips to turn the tough sod and power equipment to conquer buried minerals and forests. Power machinery is used on farms and in factories. Steam and electricity are used to drive steamboats and trains. These improvements in transportation have enabled man to trade with people in other parts of the world.

4. The terms listed suggest the following moist continental areas:

(a) Corn and hogs: Corn Belt; (b) K'ang: North China; (c) State and collective farms: Soviet Union; (d) Soybean Empire: Manchuria; (e) Silos and dairy cows: Dairy Belt; (f) Ural industrial district: Soviet Union; (g) Spring-wheat belt: North Dakota, South Dakota, Minnesota, Manitoba, Saskatchewan, Alberta; (h) Farm villages: Central Europe; (i) Farmsteads built in the form of a courtyard: North China.

5. The places listed are located in the following moist continental regions:

(a) Manchuria, East Asia; (b) Danube River, Central Eurasia; (c) Hudson-Mohawk Valley, North America; (d) Stockholm, Central Eurasia; (e) Peiping, East Asia; (f) Chicago, North America; (g) Moscow, Central Eurasia; (h) Vladivostok, East Asia; (i) St. Louis, North America.

WORKSHOP ACTIVITIES

Projects are valuable learning services for a review lesson. Some of the suggestions given in previous booklets can easily be adapted for use with Unit Seven. Other ideas for projects were included on pp. 18-19 of this booklet. Still others are listed in "Your Geography Workshop" on p. 324 of the textbook.

EVALUATING THE UNIT

In your evaluation, you will want to measure how far your students have gone in acquiring the skills, factual information, and attitudes needed to answer the "Major Questions" and other questions on the chapters, and how much progress has been made in reaching the "Primary Objectives."

There are many ways to plan your evaluation for this unit. You may wish to construct tests based on the reading material as well as on the pictures and maps in the various chapters in the textbook. You may also wish to select some of the Major Questions" or "Evaluation Exercises" in this booklet.

See also Unit Test Seven in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

UNIT EIGHT: WHERE WATER IS LIFE

BOOKLET #10

Your Own Look Ahead 1
Ch. 16: Our Great American West. . . 2
Ch. 17: The Endless Horizons of Eurasia 13
Feature: Many Sheep and Few People . 22
Reviewing Unit Eight. 23

YOUR OWN LOOK AHEAD INTO UNIT EIGHT

People have been making a living in middle latitude dry lands for centuries. In central Eurasia, many ancient cities still stand as reminders of a glorious past. Archaeologists believe that central Asian deserts once teemed with human life. The backgrounds of people descended from ancient cultures can be traced to a land which today is forbidding desert. Ruins of cities, more than a square mile in size, have been uncovered in regions which are now practically unpopulated.

In North America, early Spanish explorers and settlers found Indian tribes securing a living from the dry lands. Magellan found Indians even in desolate, southern Argentina. Because these Indians were extremely tall (by some considered the tallest known race), Magellan called the region "Patagonia, which means "big feet."

The middle latitude dry lands, which your students will study in this unit, are located in parts of four continents: North America, South America, Europe, and Asia. This large, arid, and semi-arid region of the world is different from the tropical dry lands, even though the two regions share the same problem, lack of water.

As your students study Unit Eight, they will be able to find answers to the "Major Questions" suggested below. These questions illustrate many of the "Primary Objectives" which were presented in Booklet 1. The following chart shows how the "Primary Objectives" are related to the "Major Questions" pertaining to the chapters and features of this unit.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment. Generalization: Man must adapt his way of living to the natural environment in the middle latitude dry lands.	Chapter 16, Question #1 How does the natural environment control man's activities in the middle latitude dry lands of the United States? Chapter 17, Question #2 How have the people on the dry lands of central Asia adapted to a difficult environment? Feature (pp. 360-361), Question #1 How has natural environment limited activities in southern Argentina?
Objective: To develop a real interest in worthwhile leisure activities, such as travel, reading, lectures, museum visits, and observations that will result in a better understanding of the land of the world, the peoples of the world, and their occupations. Generalization: Middle latitude dry lands in the United States contain many scenic spots, unusual landforms, and a healthful climate.	Chapter 16, Question #2 Why are some sections of the middle latitude dry lands of the United States popular tourist attractions?
Objective: To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live. Generalization: When minerals or water are available, middle latitude dry lands can be very productive.	Chapter 17, Question #1 How does the Soviet Union depend on its middle latitude dry lands?

AROUSING INTEREST IN THE UNIT

Since your students have already studied one of the dry climates of the earth, you might encourage them to recall some of the facts they learned about tropical dry lands in Unit Three. You might have them locate the tropical dry lands on a large wall map and on the World Climate Map on pp. 422-23 of their textbook. Ask them to recall facts about the Bedouins and about the oases dwellers of the dry lands of

Africa and Asia. Ask them also to recall reasons why the American deserts are more productive than other tropical dry land regions.

As your students look at the title of Unit Eight, "Where Water is Life" (p.325), they may think that they are going to study about tropical deserts and steppes again. However, have them look at the map on p. 325 and compare the location of the dry lands discussed in Unit Eight with the locations of the tropical dry lands.

The map shows that the lands to be visited in this unit are farther north and farther south than the tropical deserts. "How do you think this location affects the climate?" "What does the title of the unit suggest about the climate?" "How does the location of the lands discussed in this unit compare with the location of the moist continental areas described in Unit Seven?"

These questions may help your students to infer that the lands are dry; that they are probably colder than the tropical dry lands; and that some conditions are similar to those of moist continental areas. To verify some of the points that may have been raised in discussion, to find out additional information about the middle latitude dry lands, and to compare these lands with the tropical deserts and steppes, have your class read pp. 325-26.

The "Climate Facts" on p. 326 give climatic data for Kazalinsk, U.S.S.R., a city in a middle latitude desert, and for Tashkent, U.S.S.R., a city in a middle latitude steppe. Your students can compare this data with climate facts for cities in the tropical dry lands and with the statistics for their local community. Additional climate facts for other cities can be found in the chart on p. 420 of the textbook.

CHAPTER 16: OUR GREAT AMERICAN WEST

YOUR OWN LOOK AHEAD INTO CHAPTER 16

The middle latitude dry lands cover more area of the United States than any other climatic region. This area extends from the 100th meridian to the Cascade and Sierra Nevada Mountains and from Mexico into Canada. Most of your students will be familiar with this area if it is called the "West."

In the 1840's wagon trains bound for California began to cross this area. Most of the people passed right through the region. Only the Mormans settled there, establishing homes in the arid regions around the Great Salt Lake. The whole area was dominated by Indian tribes who hunted the roving herds of bison. With the building of the transcontinental railroad, the country was opened up for cattle raising. Great herds were grazed on the open range, but soon the cattlemen were forced to make room for the homesteaders. The homesteaders tried to make their living by farming, but few of them understood the arid climate. Long-established farming methods which had worked well in the wetter East were employed without success, and soon millions of acres of cultivated land dried up. Swarms of grasshoppers ruined the crops that did survive, and many people were forced to migrate.

Experience was a hard teacher, and farmers learned many bitter lessons from dust storms, droughts, and grasshoppers. As a result, farmers today have come to understand the climatic limitations to farming and they are learning how to adjust to the difficult environment.

The chapter is divided into a number of sections to help your class in their reading.

1. "Let's Look at Maps," pp. 328-29.

2. "The Great Plains of the American West," pp. 330-36, explains work activities in the north, central, and southern sections of the Great Plains.

3. "To the Strange Colorado Plateau," pp. 336-38, examines the cities of Santa Fe and Albuquerque, discusses the life of the Hopi, Zuni, and Navajo Indians, and describes mining activities and the spectacular scenery of this region.

4. "Over the Western Great Basin," pp. 339-41, explains why sheep raising, irrigation farming, and mining are important and describes some of the leading cities of the Great Basin.

5. "Onward to the Inland Empire," pp. 341-44, describes dry farming and irrigation farming on the Columbia Plateau.

. . . .

FOR YOUR OWN READING

The following books furnish additional background about the middle latitude dry lands of the United States.

Davis, D.H., The Earth and Man, Ch. 22, "Primitive Agriculture," "Tusayan, the Hopi Indian Country."

MAJOR QUESTIONS

Several "Major Questions" can be used in connection with this chapter. Two important ones are given below. One stresses the interrelationship between man and his natural environment while the other relates to the "Primary Objective" dealing with developing worthwhile leisure activities.

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

Major Question #1:
How does the natural environment control man's activities in the middle latitude dry lands of the United States.

Activities

Grazing: Rainfall is scanty but sufficient to grow grass, which furnishes food for cattle and sheep.

Great Plains: Ranches are large and cattle grazing is very important.
Colorado Plateau: Some cattle and sheep are grazed.
Great Basin: This dry section is more favorable for sheep.
Columbia Plateau: Some cattle and sheep are grazed.

Farming: The low rainfall makes most farming impossible unless irrigation water is available.

Great Plains: Some farming along the Platte, Arkansas, Pecos, and Rio Grande River systems. In the eastern part, the extent of winter wheat and spring wheat is limited by the rainfall.
Colorado Plateau : Some farming in small irrigated valleys.
Great Basin: Some farming in irrigated basins and around the Great Salt Lake.
Columbia Plateau: Some dry farming. Irrigation farming in the Snake River Valley and in areas served by the Grand Coulee Dam. Fruit growing is important.

Population centers: Some cities have grown where conditions are favorable.

Great Plains:
Denver, Col., meat packing and sugar beet refining.
Dodge City, Kan.)
Woodward, Okla.) cattle shipment
Amarillo, Tex.) points
Clovis, N.M.)
Colorado Plateau:
Albuquerque, N.M., transportation center near irrigation.
Sante Fe, N.M., old Spanish city and tourist resort.
Great Basin:
Provo, Utah, near iron and coal deposits.
Salt Lake City, Utah, near irrigated land.
Reno, Nev.) in irrigated
Carson City, Nev.) areas
Columbia Plateau:
Spokane, Wash., transportation and trading center.
Yakima, Wash., center of the fruit growing district.

Mining: Mining centers have grown up where minerals have been located.

Colorado Plateau: uranium and vanadium.
Great Basin: copper, lead, zinc, silver, gold, iron, and coal.

Primary Objective:
To develop a real interest in worthwhile leisure activities, such as travel, reading, lectures, museum visits, and observations that will result in a better understanding of the land of the world, the peoples of the world, and their occupations.

Major Question #2:
Why are some sections of the middle latitude dry lands of the United States popular tourist attractions?

Attractions

Beautiful Scenery
Mountains
Valleys
Deserts
Plains
Canyons

Other Attractions
Indian reservations
Health resorts
Historic old cities
Streams and forests

National Parks
Yellowstone
Glacier
Grand Teton
Black Hills
Carlsbad Caverns
Zion
Bryce Canyon
Grand Canyon
Mesa Verde

SUGGESTIONS FOR TEACHING

The teaching suggestions offered in previous booklets have presented a variety of ideas which can be incorporated into daily lesson plans. Some additional suggestions are given below for your use with Chapter 16.

Arousing Interest in the Chapter

1. A homework assignment involving two experiments, which can be done in the kitchen, is one way of securing interest in this chapter. The experiments will demonstrate two scientific principles that are important in the study of the middle latitude dry lands in North America: (1) that cooling causes condensation, and (2) that heating causes evaporation.

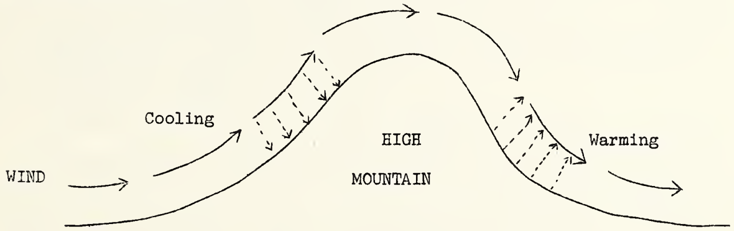
On the day before you plan to introduce this chapter, you might give your class the following assignment:

a. Fill a water glass with ice cubes. What happens to the outside of the glass? What principle of science does this illustrate?
b. Put 4 oz. of water in a saucepan. Heat the water on the stove for 5 min. Measure the amount of water again. How much water is left? (less than 2 oz.) What scientific principle does this illustrate?

Write your answers to these questions on a piece of paper and be ready to report on your experiments tomorrow.

When your students report that moisture formed on the outside of the water glass and that the water in the saucepan almost disappeared, you might help them find the scientific principles involved if they have not been able to do so alone. Most of your students will be able to see that cooling brings about condensation and that heating or warming causes evaporation.

To apply these principles to your lesson, have one of your students locate on a map the mountains that are in the far western part of the United States. As the answer(Cascade and Sierra Nevada Mountains)is given, you might draw a cross-section of these mountains on the board. Have a student check to see whether they are high or low mountains (high).



You can explain to the class that most of the wind that crosses the United States blows from the west toward the east. You can add arrows to your drawing to show this. As the air reaches the mountain, it begins to climb the mountain to get to the other side. "What happens as the air rises to go over the mountain?" (The temperature lowers from 3° to 5° for every 1,000' of altitude.) Your students will know that military airmen wear heavy clothing when they fly at high altitudes. They will know that high mountain peaks are perpetually covered with snow.

What happens when the air cools?" From the homework experiment, your students learned that moisture forms on the outside of a glass when the glass is cooled by placing ice cubes in it. A similar thing happens when the air is cooled. Moisture forms. On the drawing, you can indicate this moisture as falling rain.

When the air has reached the top of the mountain, it starts down the other side. "What happens as the air goes down the other side of the mountain?" (It warms up.) "When heating or warming takes place, what happens to moisture?" (Evaporation. The second homework experiment illustrates this point.) As the air heats up, it takes moisture from the ground. You can place large arrows showing the descending air on your drawing and smaller arrows showing evaporation taking place. This moisture is eventually deposited on the windward side of the next high mountain that is crossed.

Your class will be able to see that the land located on the leeward (sheltered) side of the mountain receives little rainfall. They already know how people make a living in some regions that receive little rainfall. At this point, you may want to have them review some of the facts about tropical dry lands. Finally, you might ask questions which will start the class thinking about this chapter. "What makes middle latitude dry lands different from tropical dry lands?" "How do people live in our middle latitude dry lands?"

2. The West has a colorful history which interests most young people. You may want to secure interest in this chapter by reading or telling your class something about the pony express, overland stage, Indians, vanishing buffalo, gold rush, silver rush, ghost towns, dust storms, homesteaders, first transcontinental railroad, Mormon's settlement of Salt Lake City, or the Lewis and Clark Expedition.

3. There are many films showing the scenery and national parks of the middle latitude dry lands. Your class would probably enjoy seeing some of them. Several are included in the 'Selected Audio-Visual Aids for Chapter 16" on p.12 of this booklet.

Let's Look at Maps (pp. 328-29). Your students are introduced to the middle latitude dry lands of North America by an imaginary airplane ride over the area. This flight is followed by the map study for Chapter 16, which not only reviews many of the map skills but also adds some new ones.

Map Skills

Skills	Review	New
Direction	N,S,E,W Latitude	
Distance	Scale--recognition of difference	
Location	Latitude, longitude	Rainfall boundary
Symbols	Political boundaries (international and state), provinces, mountains, plains, rivers, river course, plateau, lake, dam	Continental Divide
Legend	Shading to indicate rainfall and population density (relative differences) Shading to indicate rainfall (in inches)	Different hatchings to indicate middle latitude dry lands (desert and steppes)
Comparison & Inference	Size of desert and steppe areas compared Inference about name of a region (panhandle)	Inference about climatic belt from rainfall in inches

Suggested Answers for "Let's Look at Maps"

1. In the tropical dry lands of North America, the areas of steppe and desert regions are about equal.

2. The middle latitude dry lands stretch from 28°N. to 53°N. latitude. These lands may extend as far as 100 miles east of the 100th meridian. The Cascade and the Sierra Nevada Mountains form the western boundary of the entire region.

3. The Missouri, Platte, Arkansas, Red, Pecos, and Rio Grand Rivers rise in the Rockies and flow eastward across the Great Plains. Montana, North Dakota, Wyoming, South Dakota, Nebraska, Colorado, Kansas, New Mexico, Oklahoma, and Texas contain land in the Great Plains. The province of Saskatchewan, Canada, also has land in the Great Plains. The Black Hills are in South Dakota and Wyoming. The Edwards Plateau is in Texas. The Texas and Oklahoma Panhandles are the narrowest parts of the states; on a map, their shapes resemble a handle.

4. The Colorado River flows southwestward across the Colorado Plateau.

5. The Great Basin lies between the Rocky Mountains on the east and the Sierra Nevada and Cascade Mountains on the west. The Great Salt Lake is located in this region. To the west of the Lake is the Great Salt Lake Desert.

6. The Columbia Plateau and the Snake Plateau are located in the northwestern part of our country.

7. The eastern part of the middle latitude dry lands receive the greatest amount of rainfall. Notice, too, that the mountains receive a great deal of rain. The western and southwestern parts receive the least amount of rainfall. Most of the area receives between 10"-20" of rain annually. This indicates that the area is a steppe region rather than desert, since deserts usually have less than 10".

8. The eastern part of the middle latitude dry lands is the most thickly settled. The western part is the least thickly settled.

Reading About Middle Latitude Dry Lands in North America (pp. 330-44). Many of the suggestions for reading given in previous booklets can be adapted for use with Chapter 16. You may want to organize your daily lesson plans around the "Major Questions." The "Checking Up" questions on pp. 336, 338, 341, and 344 can serve as guides for your students' reading. The pictures included within this chapter also contribute a great deal of valuable information. Finally, you may want to summarize Chapter 16 by using the exercises included under "Reviewing the Chapter" on p. 344.

Preparing Oral Reports for Classroom Enrichment. As your class reads this chapter, you might have them think about topics for oral reports. Such reports can be given as enrichment material after the whole chapter has been read. Or, if you prefer, you might have your class skim the chapter, observing the pictures, so that reports can be given as each section of Chapter 16 is read. You may want to suggest some of the following topics for oral reports. (Page references refer to pages in the textbook.)

1. Lewis and Clark Expedition (p. 330)
2. Cattle ranching on the Great Plains (pictures on pp. 330 and 331)
3. The Black Hills and Mount Rushmore Memorial (p. 332 and picture on p. 332)
4. The Continental Divide (p. 333)
5. The city of Denver as a health center (p. 333 and picture on p. 333)
6. The Dust Bowl (pp. 333-34)
7. Farming in western Texas (p. 335)
8. The use of the windmill (picture on p. 335)
9. Preventing wind erosion (p. 334)
10. The history of Santa Fe (p. 336)
11. The Indian tribes of the Colorado Plateau (pp. 336-37)
12. Uses of uranium and vanadium (p. 337)
13. Grand Canyon (picture on p. 337)
14. Zion National Park (picture on p. 338)
15. Bryce Canyon (p. 338)
16. Sheep ranching in Great Basin (picture on p. 339)
17. Copper mining in Great Basin (picture on p. 341)
18. Silver mining in Nevada, 1875-1880 (p. 340)
19. Ghost towns of the West (p. 340)
20. Mormon settlers (p. 340)
21. The Great Salt Lake (p. 341)
22. Potato growing in the Snake River Valley (pp. 341-42)
23. Dry Farming (p. 342)
24. Growing apples by irrigation (picture on p. 342)
25. Grand Coulee Dam (picture on p. 343)

The practice which your students had in outlining and writing compositions in connection with Unit Seven will help them in preparing their oral reports. Your students can use the material that is in their textbooks, but you might encourage them to find out more about their topics by doing research outside of the classroom.

Each student should select his topic very carefully and well in advance of the time selected for presentation. Your students should not make their topics too broad or general. Research is easier if the topic is limited and specific.

It will probably help your students if part of a class period is devoted to a discussion of the procedure for preparing and giving oral reports. Guide your students in compiling a list of suggestions such as the following:

1. First, read the material straight through to get the whole idea.

2. Reread the material to select the important points to be stressed.

3. List the main topic headings or the main points of each paragraph. (You may want to encourage your students to list their notes on index cards.)

4. Consult your dictionary for the meaning and pronunciation of difficult words. If you are still in doubt, consult your teacher. If you cannot understand part of the reading material, see your teacher and ask her to explain it.

5. Remember, you are to give the report as you would an oral composition. You are not to read it.

6. Do not memorize your report sentence by sentence. If you do, your report will sound stilted and will not be effective.

7. Find out how long it takes you to give your report. It will help your teacher to know this.

8. Have good posture when you stand before the class.

9. Speak clearly and forcefully. Enunciate distinctly.

10. Prepare an interesting opening sentence or introduction that will catch the attention of the audience and set the stage for the report.

11. Your report is not complete unless you give the title and author of the book or books you have used as references.

12. Choose illustrative material that can be seen by the whole class, and present it in such a manner that the class has time to view it.

13. When you have completed your report, you may ask one or two questions to see whether or not your audience understands the main points.

When your students have established their own list of standards for giving oral reports, they will know what is expected of them as they prepare and present their reports.

After each presentation, you may want to have the speaker criticize his own report, using the list of standards as a guide. Your class can then discuss how well each speaker has lived up to these standards. Encourage constructive criticism, and remind your class that criticism can be directed toward strong points as well as weak ones. You may want to add some type of check-up of your own following the reports. This check-up may be in the form of questions, discussion, a brief written check, or some other means which will show whether your class understands the main ideas of each report.

Reading the Tables. In order to be able to use statistics, your students must first develop the ability to read tables. There are many tables in the "Reference and Review Section" of The World Around Us. With this chapter, you may want to use the table on p. 425 and the one on p. 420. Questions like those below can be used to give your students practice in obtaining valuable supplementary information from tables. The starring system is used to enable you to take care of individual differences in your classroom.

Table, page 420

*1. What city in the United States represents the middle latitude desert? (Reno)

*2. What is Reno's average January temperature? (32°)

*3. What United States city is representative of tropical deserts? (Yuma). What is the average January temperature for this city? (54°)

*4. What difference does this show between tropical and middle latitude deserts? (The middle latitude deserts are colder in the winter.)

**5. What is the average July temperature for Reno? (71°). How does this compare with the temperature in Yuma for the same period? (Yuma is 91°; thus, Reno also has a cooler average temperature in the summer.)

**6. In what season does the most rain fall in Reno? (in the winter)

**7. Of all the United States cities listed under the middle latitude steppe region, which one has the coldest average winter temperature? (Bismarck, N.D., with 9°)

**8. What is the lowest recorded temperature for Bismarck? (-44°). How much lower is this than the average January temperature? (53°)

***9. How much colder is the average winter temperature in Bismarck than the winter temperature of the next coldest city in the middle latitude steppe region? (20° colder than Salt Lake City's winter temperature)

***10. Compare the temperature of Bismarck in July with the July temperature of the next coolest city. (1° cooler than Denver). What does this show? (The temperature span in Bismarck is large. In the winter, the temperature is 20° or more colder than the temperature in other cities, but in the summer, the temperature gets almost as hot as it does in the other cities listed.)

Table, page 425

*1. What percentage of the total area of the United States is covered by middle latitude dry lands? (34%)

*2. What percentage of the total population lives in this area? (4%)

*3. What are important products from this area? (cattle, sheep, copper, sugar beets, oil, cotton, coal, and gold)

*4. What important cities in this area are listed? (Denver, Salt Lake City, Spokane, El Paso)

**5. What is the actual area of the middle latitude dry lands in the United States? (.34 x 3,022,387 equals 1,027,612 square miles)

**6. What is the actual population in this region? (.04 x 150,697,361 equals 6,027,894)

***7. What is the density of population in this region? (6,027,894 divided by 1,027,612 equals 5.8 people per square mile)

SUGGESTED ANSWERS FOR CHAPTER 16

Checking Up, p. 336

1. In the northern part of the Great Plains, the frost-free season is short and the number of crops that can be grown even with irrigation is small. The winters are long and severe. Grazing cattle is the chief occupation. In the central part, there are many irrigated districts where crops are raised. More cities dot the landscape, but cattle raising is still a leading industry. In the southern part, the ranches are very large as the rainfall is not only low, but evaporation is greater because the summers are longer. There is less water for irrigation. But where there is water in the south, citrus fruits and winter vegetables are raised.

2. The "Three D's" were Depression, Drought, and Dust Storms. The agricultural scientists discovered how to plow the land crosswise to the wind to keep the soil from blowing away and to catch the blowing dust. They also learned that a series of ridges of soil in the field prevented water from running off when it did rain. Grasses were planted to hold the loose soil. Rows of trees were planted along the sides of fields to cut the strength of the winds. Previously, ranchers had used windbreaks to protect their houses and barns but had not thought of protecting their fields in the same way.

3. Windmills are common on western ranches for two reasons. Many of the ranches depend upon wells for their water supply, and windmills pump water. This region is very windy so that the people can depend upon wind to turn the windmills.

Checking Up, p. 338

1. Navaho, Hopi, and Zuni Indians live on the Colorado Plateau. The Navaho are herders. The Hopi are irrigation farmers.

2. Vanadium and uranium are mined on the Colorado Plateau. Vanadium is used in making a tough, high-grade steel. Uranium is used in the production of atomic power.

3. The Grand Canyon is located in Arizona; Zion and Bryce Canyons are in Utah.

Checking Up, p. 341

1. Sheep are more important than cattle in the Great Basin because they can live on the scantiest bunch grass and desert shrubs. The shepherd must move his flocks from place to place to find grass and water.

2. In areas where water is available, there is some irrigation farming in the Great Basin. The farmer sells his crops to the people in Salt Lake City and the mining centers of Utah and Nevada.

3. In mining copper, the miners dig straight into the sides of steep mountains. As the huge shovels tear away the rock, miners cut terraces into the mountainside for small railroad tracks. The shovels dump their ore into ore cars. Silver, lead, zinc, gold, iron, and coal are also mined in the Great Basin. Mining is very expensive since special plants must be built and mining machinery is expensive. Many companies must even build their own electric plants and railroads.

Checking Up, p. 344

1. In dry farming, a field is used for a crop every third year. The other two years it is cultivated but not planted. The unplanted field then absorbs

moisture. Dry farming is practiced on the Columbia Plateau because the annual rainfall is low. Farms are large because a farmer uses only a third of his land at any one time. Modern machinery such as tractors, gang plows, disk harrows, weeders, and combines is used.

2. Irrigated fruit farming is also carried on on the Columbia Plateau.

3. In the winter, the fruit grower prunes his trees. In the spring,he cleans out irrigation ditches, digs new irrigation ditches, and plows grass under for humus. In the summer, he irrigates, sprays, thins the fruit, and props up the branches weighted by ripening fruit. Fruit is harvested and packed in late summer and fall. Climate favors apple growing because summers are hot and, even in winter, the temperature seldom drops to zero. Almost constant sunshine gives the apples a smooth, brightly colored skin.

Questions to Think About, p. 344

1. The farmers are said to be gambling with weather because success depends on how much rain falls during the year. In dry years, the farmer may suffer crop failure and not be able to produce an income. The farmer must also keep a sharp eye on his water supply because, if the wells go dry, there is no other available source of water. The livestock and people living on the farms depend on this water.

2. Alfalfa is one of the most important crops in irrigated areas because it is a valuable livestock feed. Ranchers can use it to fatten some of their own cattle, instead of sending all of the cattle east to be fattened in the corn belt.

3. The central and southern sections of the Great Plains have some irrigated farming areas. In the central section, the Platte and Arkansas Rivers with their tributaries furnish water for irrigation. In the southern section, the Pecos River and the Rio Grande make water available for irrigation.

4. The Great Basin includes most of Nevada, the western half of Utah, part of southeastern Oregon, southern Idaho, and a part of California east of the Sierra Nevada. The Great Basin is really made up of many small basins which lie between mountains running north and south. Most of the area receives no more than 10" of rain each year. There are many beds of dried-up lakes where layers of salt cover the ground. Most of the people follow grazing occupations. There is some irrigation farming where water is available. Farmers grow sugar beets, wheat, and alfalfa as well as fruits and vegetables which are sold in Salt Lake City or mining communities in Utah and Nevada. The Great Basin is rich in minerals. Copper, silver, lead, zinc, gold, iron, and coal are mined. The chief cities in this region include Salt Lake City and Provo, Utah; Reno and Carson City, Nevada.

5. The irrigated areas on the Columbia Plateau are the Yakima, Wenatchee, and Okanogan Valleys.

6. The Grand Coulee Dam is on the Columbia River in the state of Washington. The dam was built to furnish more irrigation water to the Inland Empire on the Columbia Plateau. The dam also produces hydroelectricity which is distributed to the Inland Empire.

7. Millions of tourists visit our middle latitude dry lands each year to enjoy the beautiful scenery and to visit the many national parks.

8. The total population of these vast middle latitude dry lands is only about the same as the state of Illinois because the rainfall is low. Much land is needed for ranching and sheep grazing. Irrigation farming is limited by the scarcity of water. There is much mining but little industry. All of these work activities require a great deal of land to support a few people.

Among Ourselves, p. 344

These questions are best answered by having your students compare life in the middle latitude dry lands with everyday living in their local community.

EVALUATION EXERCISES

To Check on Your Students' Knowledge of Factual Information

Directions: To visit the national parks in the West, travel from park to park by correctly answering each question.

Home to Black Hills	1. What is the chief activity in the middle latitude dry lands of the United States? (grazing livestock)
Black Hills to Yellowstone	2. What section of this area is the driest? (Great Basin)
Yellowstone to Zion	3. What natural vegetation grows in the area? (grass)
Zion to Bryce Canyon	4. What dam furnishes water for parts of the Columbia Plateau? (Grand Coulee)
Bryce Canyon to Grand Canyon	5. What mountains are located in the middle of these dry lands? (Rockies)
Grand Canyon to home	6. What valuable mineral used for atomic power is being mined in this region? (uranium)

To Check on Your Students' Knowledge of Vocabulary

Directions: Match the statements in Column I with the words in Column II. Answer by using numbers and letters.

Column I

1. A line created by mountain ridges that determines the flow of water (d)
2. A steep, flat-topped hill (a)
3. A deep cut made in the land by a river (e)
4. A hill or mountain with steep sides rising out of the surrounding plain (b)
5. Rough land along old stream beds (c)

Column II

a. mesa
b. butte
c. river break
d. Continental Divide
e. canyon

To Measure Your Students' Understanding of Places and Things in the Middle Latitude Dry Lands

Directions: Tell in which section of the middle latitude dry lands each item in the following list is most likely to be found (in the Great Plains, Colorado Plateau, Great Basin, or Columbia Plateau.)

Platte River (Great Plains)
Grand Canyon (Colorado Plateau)
Great Salt Lake (Great Basin)
Grand Coulee Dam (Columbia Plateau)
Copper mining (Great Basin)
sheep ranching (Great Basin)
apple growing (Columbia Plateau)
dry farming (Columbia Plateau)
winter wheat (Great Plains)
large ranches (Great Plains)

To See Whether Your Students See the Relationships Between Natural Environment and Man's Activities

Directions: Multiple choice. Choose the answer which best completes each statement.

1. Ranching is important in these dry land areas because (a) there are many ranches; (b) grass grows naturally; (c) there are mountains; (d) all of these.

2. Some rivers flow across the Great Plains because (a) of heavy rainfall; (b) they come from the Mississippi; (c) of melting snow in the mountains; (d) all of these.

3. Winter-wheat farmors control wind erosion by (a) plowing with the wind; (b) planting wheat every year; (c) planting windbreaks; (d) all of these.

4. Some cities have developed because (a) they are cattle shipping points along the railroad; (b) they are near irrigated areas; (c) they are near mineral deposits; (d) all of these.

5. Sheep outnumber cattle 3 to 1 in the Great Basin because (a) they can live on scanty bunch grass; (b) the people like sheep better; (c) wool is more valuable than beef; (d) all of these.

6. Many tourists visit the West each year because of (a) national parks; (b) beautiful scenery; (c) health resorts; (d) all of these.

STUDENT READING LIST FOR CHAPTER 16

NONFICTION

**North America by Plane and Train, Aitchison, A., and Utley, M. (Bobbs). Cattle and sheep ranches, the mining camps, national parks,.and tunnels through the mountains add to the picture of the West.

*Life In America: The Great Plains, Havighurst, W. (Fideler, 1951). The wide, dry expanse of the North American plains with its cattle and sheep makes its contribution to the picture of life in America.

*Life In America: The West, Morgan, D. (Fideler, 1951). Mountains and basins, sand and sage brush, cattle and sheep, timber and minerals are very typical of the West.

FICTION

**Lost Horse, Balch, G. (Crowell, 1950). Ben and Dixie Darby help their family and care for horses on their ranch in Idaho.

**Wild Horse, Balch,G. (Crowell, 1948). What could a boy and girl do when their beautiful black stallion was captured for the rodeo?

**Winter Horse, Balch, G. (Crowell, 1951). An extremely hard winter makes Ben and Dixie concerned for the wild horses in the Owyhee Range country of Idaho.

**Tornado Jones, Dick, T. (Wilcox, 1953). Searching for excitement, Tornado and his friends discover a team of anthropologists digging for Indian relics.

***My Sky Is Blue, Erdman, L. (Longmans, 1953). Jinny Craig decided to forget a tragic love affair and went to live in rural New Mexico. Here she learns to love all over again.

*Silver Spurs for Cowboy Boots, Garst, D. (Abingdon, 1949). Bob's routine summer of working around the ranch takes a surprising turn when he is captured by rustlers.

***The Homeplace, Gipson, F. (Harper, 1950). Sam Crockett's three children, his ex-ranger grandfather, and an assortment of neighbors and animals bring a gay but almost disastrous adventure to the Texas hill country.

***Buckaroo, Hess, F. (Macmillan, 1931). A teacher finds out what ranch life is like with a first-hand experience in the cattle country of Nevada.

**Holiday Mountain, Jones, L., and Jones, J. (Westminster, 1949). In order to save their Colorado mountain resort, the Campbells race against time to raise the needed money.

**And Now Miguel, Krumgold, J. (Crowell, 1953). It was Miguel's job to guard his sheep from the weather, sickness, and wild animals, and each week presented a new kind of danger to the flock.

*Texas Tomboy, Lenski, L. (Lippincott, 1950). A ranch owner has to know his arithmetic. Charlotte finds out that even cowboys must go to school.

**Yakima Boy, McGavran, G. (Friendship, 1952). Two Yakima Indian boys are torn between the ancient ritual of their tribe and modern beliefs.

**Pita, Mulcahy, L. (Coward-McCann, 1954). Papa Lopez managed the irrigation ditch for his New Mexican village. Complications arose when his daughter was invited to a dance in a rival town.

**Big Mutt, Reese, J. (Westminster, 1952). Branded as a sheep killer, the big mutt has little chance to prove his innocence when he is abandoned in a blizzard.

***Forest Ranger, Rush, W. (Morrow, 1945). John Duncan, just out of college, enters the United States Forestry Service in the early days of the organization.

***Wild Horses of Ramrock, Rush, W. (Longmans, 1951). Dan Gordon had to tame not only a Montana stallion but his uncle as well.

***Winter Wheat, Walker, M. (Harcourt, 1944). A girl loses faith in her parents and in the value of life. Her faith is restored through her love of the Montana land where she lives.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 16

Along the Texas Range, 1942 (mp, b&w, sound, 10 min, #60). A descriptive tour through western Texas, showing the goat herders and cowboys.

Apples (From Seedling to Market), 1950 (mp, color, sound, 10 min, #23). Shows the major steps in apple growing and packing in the Wenatchee Valley in Washington.

Canyon Country (mp, color, sound, 13 min, #30). Captures the beauty of the canyon and surrounding countryside, which attracts many visitors every year.

Cattle Drive, 1950 (mp, color, sound, 10 min, #23). The movement of cattle from the range to shipping points. Emphasizes the work of the cowboy during the drive.

Geography of the Rocky Mountain States, 1952 (mp, color, b&w, sound, 10 min, #20). Grazing,irrigation, farming, mining, and lumbering are depicted to give an over-all view of this region.

Golden West, 1941 (mp, b&w, sound, 9 min, #51). The development of the American West from the first mining prospectors to the modern methods of today.

Grand Canyon, 1949 (mp, color, sound, 17 min, #56). Presents views of the south rim and mule pack parties on canyon trails as well as life on a dude ranch.

High Plateaus of Utah, (fs, color, 38 fr, #15). Beauty of the region is shown along with the national state parks and other tourist attractions.

Home on the Range, 1942, rev. 1946 (mp, b&w sound, 9 min, #65). The western range country with its cattle and sheep and the men who make up the real West.

The West, 1953 (fs, b&w, 69 fr, #37). Shows the physical features, the natural resources, the industries, and the important cities.

Life in the Grasslands (North America), 1954 (mp, color, sound, 11 min, #23). Glimpses of plant and animal life in the grasslands. The film shows adaptation of wild life in getting food and struggling for survival.

Life on a Cattle Ranch, 1955 (mp, color, b&w, sound, 10 min, #20). Home life on a cattle ranch and the satisfaction of raising and selling cattle.

Life on a Sheep Ranch, 1955 (mp, color, b&w, sound, 10 min, #20). A Colorado sheep ranch with its integrated and seasonal activities.

Montana, 1947 (mp, color, b&w, sound, 10 min, #39). Shows the mountains, grasslands, and farmlands and describes copper mining, sheep and cattle raising.

Northwestern States, 1942 (mp, b&w, sound, 11 min, #23). The physical aspects of the region are pointed out as influencing present-day activities. The interdependence of this region with other regions is given special emphasis.

The Prairie, 1952 (mp, color, sound, 16 min, #11). The physical environment of the North American prairie region provides a home for man with his crops and livestock.

Then and Now in the Rocky Mountains, 1952 (fs, color, 43 fr, #57). Uses past events and the physical setting to explain the present-day picture.

Plateau Region, 1952 (fs, color, 45 fr, #69). Part of the U.S. Regional Geography Series which pictures physical and human geography.

Prairie Provinces of Canada, 1943 (mp, b&w, sound, 11 min, #23). Manitoba, Alberta, and Saskatchewan contribute to Canada as a whole. The chief emphasis is on agriculture, mining, and commerce.

The West, 1954 (set of 4 fs, color, #58). "Dry Lands of the West (Southern Section)" and "Dry Lands of the West (Northern Section)" give an idea of the sparse population, the mines, the ranches, and the landscape.

Yellowstone--Grand Tetons, 1947 (mp, color, sound, 22 min, #34). The recreational facilities as well as the natural wonders and wild life of these parks.

CHAPTER 17: THE ENDLESS HORIZONS OF EURASIA

YOUR OWN LOOK AHEAD INTO CHAPTER 17

Many ancient cities are located in the oases of central Asia. Although buried deep in the dry heart of Asia, the richness of these cities has attracted men for ages. In 329 B.C., Alexander the Great invaded these dry lands and captured the famous oasis city of Samarkand. Oasis cities, such as Samarkand, were stepping stones on the ancient trade route between China and the Mediterranean countries. Goods passed along this route between the old civilizations of Egypt, Mesopotamia, India, and distant China. Before an all-water route was found, merchants from the Orient exchanged their goods with tradesmen from Ancient Greece, Rome, and even Roman Britain by using the overland caravan route.

Today, most of these dry lands of Asia are under the political influence of the Soviet Union. People who would normally follow a nomadic existence have been marshaled onto huge state and collective farms. The rivers of central Asia, which frequently have no mouths because they dry up in the desert, are being used for irrigation. Hundreds of miles of irrigation canals have been built. Thousands of people who only a short time ago followed their herds of sheep and goats now run complicated farm machinery.

The chapter is divided into a number of sections to help your students organize their thinking and to facilitate their reading.

1. "Let's Look at Maps," pp. 346-47.

2. "The Ukraine, Breadbasket of the U.S.S.R.," pp. 348-51, describes the richness of the Ukraine as an agricultural and industrial section and discusses some of the leading cities of this region.

3. "Along the Don and Volga Rivers," pp. 351-53, tells how the Soviet government, through the Greater Volga Project, is improving agriculture in this dry land section.

4. "Between the Caspian Sea and Sinkiang", pp. 353-55, points out many changes that have taken place in this ancient land.

5. "Sinkiang, Land of Basins and Oases," pp. 355-57, describes how the people make use of the hot, dry winds to dry their fruit crops and explains why there is very little industry in the region.

6. "Mongolia, A Land of Fierce Winds," pp. 357-59, visits the Mongols, the nomadic people near the Gobi Desert, who depend upon their sheep much as the Bedouins depend upon their camels.

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FOR YOUR OWN READING

One of the following books may be used to supply additional information about the middle latitude dry lands of Eurasia.

Cressey, George B., Asia's Lands and Peoples, Ch. 8, "Regions of Inner Asia."
Cable, Mildred, and French, Francesca, The Gobi Desert.
Heden, Sven, The Silk Road.
Gregory, James, and Shave, D.W., The U.S.S.R., Ch. 13, "The Ukraine", to p. 521.

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MAJOR QUESTIONS

The "Major Questions" included for use with Chapter 17 are related to the "Primary Objectives" dealing with ways in which the people of the earth live and the ways they have adapted their living to the environment. Information is included to answer the "Major Questions."

Primary Objective:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

→

Major Question #1:
How does the Soviet Union depend on its middle latitude dry lands?

Ukraine	Don & Volga Region	East of Caspian Sea
Agriculture: 1. Breadbasket of Soviet 2. Rich soil 3. Rainfall low but dependable in north 4. Rainfall undependable in south 5. Large state and collective farms 6. Crops include wheat, millet, and sugar beets Minerals: 1. Coal in Donets Basin 2. Iron ore at Krivoi Rog Manufacturing: 1. Iron and steel 2. Related industries produce ball bearings, machine tools, farm machinery, and locomotives 3. Other industry manufacture brick, chemicals, glass, cement, china, and aluminum Cities: 1. Kiev: "mother of Russian cities" 2. Kharkov: iron & steel 3. Odessa: Black Sea port 4. Dnepropetrovsk: electricity	Agriculture: 1. Rainfall very uncertain 2. Severe droughts and scorching wind 3. Rich soil 4. Irrigation from the Greater Volga Project 5. Large state and collective farms 6. Conservation methods employed 7. Machinery is used 8. Crops: wheat, millet, sorghums, sunflowers 9. Crop failures are common Manufacturing: 1. Oil refineries 2. Chemicals 3. Farm equipment Cities: 1. Stalingrad: located between the Donets coal fields and the grain-producing producing region; river port and transportation center	Agriculture: 1. Irrigation farming at oases 2. Crops: fruits, cotton, sugar beets, tobacco, vegetables Livestock: 1. Raised on collective farms 2. Cattle and sheep raised for meat 3. Astrakhan and karakul sheep raised for skins Minerals: 1. Coal and iron ore 2. Oil near Caspian Sea 3. Sodium sulfate 4. Others: sulfur, phosphates, gold, radium, tungsten, chrome Manufacturing: 1. Iron and steel 2. Textiles Cities: 1. Karaganda: steel 2. Tashkent 3. Bukhara 4. Samarkand

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

→

Major Question #2:
How have the people on the dry lands of central Asia adapted to a difficult environment?

Sinkiang	Mongolia
Housing: The oasis dwellers have dug deep cellars under their homes. All work stops during the hottest part of the day and families retire to their cool cellars.	Housing: The Mongol's house, the yurt, is a dome-shaped tent of cloth or felt made from wool. Its rounded shape can withstand the violent winds. The house is warm when the winters are cold.
Agriculture: The oasis farmers grow mainly fruit. They use the hot desert breezes to dry their fruit. The Turfan Oasis is famous for its dried seedless grapes called Turfan sultana.	Livestock: The Mongols are nomadic. The most important animal is the sheep. It furnishes them with shelter, clothing, meat, milk, butter, and cheese.
Minerals: Oil, iron ore, coal, gold, copper, lead, zinc, salt, borax, and nitrate are found. Mining has developed very slowly because of poor transportation.	Agriculture: The Chinese oasis dwellers grow mostly fruits. Each oasis specializes in some particular crop.
	Food: Besides a little millet and tea, the Mongols eat mainly milk and cheese provided by the sheep and goats.

SUGGESTIONS FOR TEACHING

In guiding your class in their search for answers to the "Major Questions," you may wish to employ some of the ideas suggested for previous chapters. They can easily be adapted for use with chapter 17. Additional suggestions which you may want to include in your daily lesson plans are given below.

Arousing Interest in the Chapter

1. The story of the Kazakhs' flight to freedom is an adventuresome tale which will kindle the interest of most students. This true story, entitled "How the Kazakhs Fled to Freedom," was related by Milton J. Clark in *The National Geographic Magazine*, November 1954, Vol. CVI, No. 5, pp. 621-44. The article also contains

many fine photographs that can be used to illustrate life in the dry lands of central Asia.

The Kazakhs are the nomads of the lands east of the Caspian Sea. They comprise ten per cent of the population of Sinkiang. Their forefathers have roamed the steppes of central Asia for 2,000 years. In 1949, semi-arid Sinkiang, two-and-a-half times the size of Texas, came under the political control of the Chinese Communists. Large groups of Kazakhs, feeling that their liberty was in jeopardy, decided to meet at an oasis in the desert to decide what could be done.

During the winter of 1949-50, groups of Kazakhs came to the meeting place from widely scattered sections of central Asia. Yurts, the Kazakhs' dome-shaped tents, were pitched for miles across the landscape. Assembled within sight of the sultan's tent were 15,000 people, 60,000 fat-tailed sheep, 12,000 horses, 7,000 head of cattle, and more than 1,000 camels.

The Kazakhs' council asked the Communist government to guarantee religious freedom, preservation of tribal customs, and liberty to travel at will within Sinkiang. But the new Communistic regime let it be known that the government and not the Kazakhs would set the terms. With this discouraging news, the whole clan decided to move southward across the high mountains into the free country of India.

Just as they were about to leave, a Communist army surprised the camp, attacking without warning. The Kazakhs were used to unequal odds, and even the latest military equipment held no terror for them. Shouting their battle cry and riding their beautiful horses at full gallop, the warriors struck back at the Communists. "One shot, one dead enemy" was the standard of marksmanship. But against an enemy equipped with modern arms and equipment, there could be no hope for victory. Kazakh fighting men fell by the hundreds.

Of the 15,000 people who were assembled for the tribal meeting,12,600 were killed. The rest started to flee across the desert toward safety. The march took two years. The escape was slow because the flocks and herds could not travel at great speed. The group could not hope to outrun their pursuers. They depended on their knowledge of the desert and secret water holes to take them safely to freedom.

Crossing the Sinkiang desert in the winter is no easy task. Sandstorms and snowstorms swirled around them. Most of the secret waterholes were frozen, and they avoided the better-known ones, fearing the Communists would ambush them there. They got their drinking water by breaking the ice and melting it. Many of their animals died or were killed for food.

Finally, after two years of fleeing across the steppes and deserts of central Asia, the little band reached the Kashmir section of India and freedom. Of the 4,000 families who had set out from Sinkiang, only 350 persons reached Kashmir.

Your students will probably have many questions about the land from which these people came. "How were the Kazakhs able to cross the desert, knowing only secret water holes? "Does it snow in the desert?" Questions such as these can be used to stimulate your class discussion.

2. A book report, based on one of the fiction books dealing with the dry lands of Eurasia, could also be used to draw your students' attention to this area. Several books are listed in the "Student Reading List for chapter 17" on p. 21 of this booklet.

3. Films and filmstrips will stimulate thinking among your students. You may want to use one of those listed in the "Selected Audio-Visual Aids for Chapter 17" on pp. 22 of this booklet.

Let's Look at Maps (pp. 346-47). After your students have read the introduction on p. 345 describing the imaginary flight from New York City to Ankara, Turkey, they will be ready to undertake the map study. Many of the map skills which were introduced with earlier map studies are reviewed.

Map Skills	Review
Direction	N,S,E,W,NW Latitude
Distance	Scale--recognition of differences
Location	Latitude
Symbols	Political boundaries, plain, mountains, sea, rivers, lake, province, basin
Legend	Color to indicate climatic regions Different hatching to indicate middle latitude dry lands (steppes and deserts) Shading to indicate rainfall and population density (relative differences)
Comparison & Inference	Areas of various climatic regions compared Rainfall in two areas compared Inference about effect of rainfall on population density

Suggested Answers for "Let's Lock at Maps"

1. The dry lands in central Eurasia lie between 30° N. and 54° N. latitude. The middle latitude dry lands are one of the larger climatic belts in Eurasia.

2. In the west, Turkey, Iran, Afghanistan, and Pakistan contain dry lands. Far to the east, China and Mongolia have desert and steppe regions.

3. By following the directions, your students can see the mountains to the east and south of the dry lands of the Soviet Union.

4. The Dniester, Don, Volga, and Terek Rivers flow through the European dry lands. In the Asiatic dry lands, the Kura River flows into the Caspian Sea; the Amu Darya and Syr Darya Rivers flow into the Aral Sea; and the Tarim River sinks into the desert.

5. Sinkiang is almost surrounded by mountains. On the north are the Tien Shan Mountains. On the south are the Kunlun Mountains, and on the west are the Pamirs. The Tarim River Basin lies in the desert area of Sinkiang.

6. The large desert in southern Mongolia is the Gobi Desert.

7. Rainfall in the western and northern sections of the dry lands is heavier than the rainfall in the area east of the Caspian Sea.

8. The area of the Soviet Union just north of the Black Sea is the most densely populated. In areas where there is more rainfall, agriculture can be carried on to provide food for a greater number of people.

Reading and Summarizing (pp. 348-59). Another reading method that many teachers find successful is the technique of reading and summarizing. Students read one paragraph and then close their books. One or two good summary sentences are either written or given orally by the students. When a satisfactory summary sentence has been given, the class then proceeds to read the next paragraph.

You may want to try this method with the reading about "The Ukraine, Breadbasket of the U.S.S.R." on pp. 348-51. You can have your students read the first paragraph in the section silently and immediately.close their books. A ruler, pencil, or sheet of paper can be inserted in the textbook so that the proper pages can be found again quickly.

Your class might write one or two good sentences that summarize the main points in the paragraph. You can call on some of the students to read their summary sentences orally. When you are satisfied that everyone has summarized the paragraph properly, the class can open their books and read the next paragraph. This, too, can be summarized in the same way. After everyone in the class has learned to do a satisfactory job, you might let them try to summarize the paragraphs orally without writing their sentences first. You can give your students a few minutes to think about the summary and to mentally organize their sentences. Some of the summary sentences might look like those below, which cover the reading material on pp. 348-49.

Section and Paragraph	Sentence
"The Ukraine, Breadbasket of the U.S.S.R.," p. 348 Par. 1	The Ukraine is one of the important agricultural and industrial areas in the Soviet Union.
Par. 2	The Ukraine grows so much food that it is called the "Breadbasket of the Soviet Union."
Odessa, Russian Port on the Black Sea, p. 348 Par. 1	Odessa, a port on the Black Sea, has few foreign vessels because the government restricts international trade.
"Over the Northern Ukraine," p. 348 Par. 1	In a Ukrainian farm village, the thatched wooden houses are surrounded by gardens. Cattle and geese are raised in the meadows.
Par. 2	The chief crops raised in northern Ukraine are wheat and sugar beets. Cattle are fattened on fodder crops.
Par. 3	The climate is like the northern part of our Great Plains. The rainfall is dependable, and there is good soil.
"Over the Southern Ukraine," p. 349 Par. 1	Rainfall is uncertain in the southern part of the Ukraine. The flat, treeless plain produces wheat, barley, sugar beets, sunflowers, tobacco, and cotton.
Par. 2	Most of the farming is done on huge state and collective farms, but the farmers are very poor.
"Mining and Industry of the Ukraine," pp. 349-50 Par. 1	The Ukraine contains rich deposits of coal and iron ore.
Par. 2	To save transportation costs, iron and steel mills have been built at both ends of the railroad which connects the coal and iron fields.
Par. 3	The Ukraine is one of the chief industrial centers. The industries related to iron and steel and other manufacturing are aided by hydroelectricity and a good transportation system.

Reading and summarizing gives your students practice in selecting the main points in a paragraph. You may want to stress some of the suggestions that were given for oral reports on p. 6 of this booklet to help students as they answer orally. The "Checking Up" exercise on p. 351 can be used to unify the section.

The other sections of this chapter can be read and summarized in a similar manner. The Checking Up exercises on pp. 353, 355, 357, and 359 as well as the exercises included in "Reviewing the Chapter" on p. 359 can be used to organize thinking and to point out important geographic relationships.

Securing Additional Information from Pictures. The pictures in this chapter can be used as sources for additional information for comparing the dry lands of Eurasia with those in the United States. The following exercise may be used to motivate your students before they read the chapter. Or, if you prefer, it may be used to help them summarice the chapter after the reading has been completed.

Page	Question	Answer	Probable Conclusion
348 & 289	What is similar in these pictures?	Grain is being grown. Land is level. Combines are cutting and threshing grain.	The Ukraine is similar to the Great Plains of the United States.
	Where was each picture taken?	p.289: Great Plains p.348: Ukraine	

Page	Question	Answer	Probable Conclusion
349	What does this picture tell us about mineral deposits in the Ukraine?	Coal and iron ore are most likely present in the region.	The Soviet is making use of mineral deposits in the Ukraine.
352, & 343	What is similar in these two pictures? How do both dams help industry? Where is the dam on p. 343? Where is the dam on p. 352?	Both show dams that generate hydroelectricity. They provide power for industry. The Grand Coulee Dam is in the state of Washington. The power station being constructed is on the Volga River in the U.S.S.R.	Industry is able to use the power generated by storage dams. Farmers also use the water for irrigation.
353 & 339	What is similar in these two pictures? Where was each picture taken?	Land is dry. Sheep are being herded. Houses are the type that can be moved from place to place. The herders depend on horses. p. 353: Somewhere east of the Caspian Sea. p. 339: Great Basin of the United States.	Grazing of livestock requires moving from place to place to find pasturage. Grass grows in the dry land areas.
355	Where do these people live? Where did the woman get the raw material for the cloth she is weaving? Why do you think the loom is made of poles? Out of what is the yurt made? Why do you think it is dome-shaped and tied down? What beast of burden do these people have?	These people live in Sinkiang. The threads for the cloth were probably spun from the wool of sheep or goats. The loom is made of poles so that it can be dismantled and transported easily. Poles might also be the easiest building material to find. The yurt seems to be made of heavy cloth. It is dome-shaped and tied down to withstand violent winds of the desert. The people probably use the ponies in the background as beasts of burden.	Some people in the dry land of Sinkiang are nomads who follow their flocks and herds from one place to another. They have adapted their ways of living to their natural enviornment.

SUGGESTED ANSWERS FOR CHAPTER 17

Checking Up, p. 351

1. The Ukraine is important to the Soviet Union because one fifth of the Soviet people live there. It produces one half of the coal, two thirds of the iron, one fourth of the wheat and millet, and three fifths of the sugar beets.

2. Two advantages for farming in the northern Ukraine are the level land and the fertile soil. The farmers grow sugar beets, wheat, potatoes, hay, rye, barley soybeans, sunflowers, and vegetables. Many farmers also grow fruit trees.

3. The Ukraine has helped Soviet rulers to increase the industry of the U.S.S.R. The Ukraine contains large deposits of iron ore and coal. The coal and iron fields are connected by a railroad, and steel mills are located at both ends. In this way, transportation costs are saved because it is not necessary to haul empty railroad cars in either direction. Other factories make bricks, chemicals, glass, cement, chinaware, and aluminum. There is a large dam which provides hydroelectricity, and the whole industrial region is connected by a network of railroads.

Checking Up, p. 353

1. Living is difficult on the steppes around the Don and Volga Rivers because rainfall is uncertain and severe droughts often occur. In addition, hot dry winds from the deserts to the east often wither the crops and cover the fields with dust. The Greater Volga Project is meant to solve these problems. A series of dams on the Volga River and its tributaries will supply water for irrigation and will hold back flood waters. The Greater Volga Project will also provide water to keep the Volga River deep enough for river boats. A connecting canal enables boats to go from the Volga River to the Black Sea.

2. In addition to wheat, the state farms grow millet, sorghums, and sunflowers.

3. Stalingrad is the largest city in this region. It is important because of its location between the Donets coal basin and the grain farms of the steppe land. It is a river port and transportation center. The city contains oil refineries, sawmills, woodworking plants, steel mills, chemical plants, and plants that make tractors and farm machinery.

Checking Up, p. 355

1. The government has changed the method of stock raising on the steppes of central Asia. Today, livestock is raised on large collective farms. Workers cut hay in the autumn to feed to the stock during the winter. Winter feed is often shipped to the collective farms from irrigated regions. Today, there are no nomads in this region because the Soviet government has forced all of the wandering people to settle on collective farms.

2. The famous oases of central Asia are located at Tashkent, Bukhara, and Samarkand. These cities were important in the past, before Europeans discovered that they could sail around Africa to reach Asia. Camel caravans stopped at these cities on their trips between Europe and China. Today, these cities contain large, modern factories. On oases near these cities, fruits, rice, wheat, and cotton are raised.

3. Five important industrial resources found in central Asia are coal, iron ore, copper, oil, and sodium sulphate. Some of the new industries that have come into the regionsare the textile, fertilizer, iron and steel, and chemical industries.

Checking Up, p. 357

1. The people of the Sinkiang oases have adjusted their lives to the summer heat and dryness by building deep,furnished cellars in their homes. During the hottest part of the day, all shops are closed and everyone retires underground to his cool cellar.

2. The most famous crop of the Turfan Oasis is dried fruit, especially raisins and currants. The hot desert winds benefit the grower of this crop because the winds dry the fruit, which is placed in drying halls made of spaced bricks and latticework.

3. Some of the mineral resources of Sinkiang include petroleum, iron ore, coal, gold, copper, lead, zinc, salt, borax, and nitrate. Industry has developed slowly in this area because it is in a remote part of Asia, and there is very little modern transportation.

Checking Up, p. 359

1. The yurt makes a good home for the Mongol family because it can withstand the violent mongolian winds.

2. The Mongol's day begins at sunrise, when sheep and cows are milked. Breakfast consists of tea, sour milk, and millet. Men take the herd to pasture. Women clean the yurt and make cheese and butter. The women spend the rest of the day mending clothes and household goods, or chatting and gossiping with their neighbors. The men repair harnesses or tools, doctor sick animals, or just talk. There is no noon meal. The women keep a pot of food on the fire and anyone who is hungry helps himself. About five o'clock the herds return and are given water from a well. The cows and calves are tied up near the yurt; the sheep and goats are driven into brushwood pens; and the camels are grouped in a circle off to one side. The animals are again milked. When all work is over, the women prepare the evening meal. The Mongol is very dependent on his sheep because they furnish him with shelter, clothing, meat, milk, cheese, and butter.

3. A traveler in Mongolia will probably remember the fierce desert winds which frequently blow continuously day and night for several weeks.

Questions to Think About, p. 359

1. The Ukraine is called the Breadbasket of the Soviet Union because it provides one fourth of the Soviet wheat and millet and three fifths of the sugar beets.

2. A typical farm village in the Ukraine stands on the bank of a small river. Thatched frame or log houses stand among gardens of melons, pumpkins, and vegetables. Meadows and small areas of woodland surround the village.

3. The Greater Volga Project is being constructed to bring more water to the steppe regions around the Don and Volga Rivers. A series of dams are being constructed to furnish water for irrigation. The dams will improve navigation on the Volga River. A canal also furnishes the river with an outlet to the Black Sea.

4. Stalingrad's location between the Donets coal basin and the grain farms of the steppe lands have made it one of the Soviet's most important industrial cities. It is a river port and also has rail connections with all the important parts of the Soviet Union.

5. A visitor to the desert cities east of the Caspian Sea might see mud huts, felt tents, mosques, houses of sun-dried brick, brilliantly colored native dress, camel caravans, fine rugs, carpets, silks, leather goods, metal work, and enameled tiles - all reminders of the past. The visitor might also see automobiles, buses, trucks, unveiled women, modern buildings, modern markets, broad,straight streets, factories, office buildings, and hydroelectric plants, which are signs of the present.

6. All life in Mongolia depends upon pasture for the Mongol's flocks of sheep, cattle,horses,and camels. Of these animals, the Mongol is most dependent upon his sheep, from which he gets his food, clothing, and even his home.

7. In the Turfan bazaar one might see many shops with their front sides opening out onto the street. The shopkeepers wear high leather boots and embroidered caps. They sit cross-legged on long tables with their goods spread out around them. There are carpets, rolls of brilliantly colored cotton, silk, and velvet cloth, dyed leather goods, and mounds of dried fruit. The merchants close their shops at midday because of the intense heat. Most people have a deep cellar in their house where they spend the hottest part of the day.

8. The city of Odessa is on the northern shore of the Black Sea, in the Ukraine section of the Soviet Union. Few foreign ships use this port because the Soviet government limits the number of foreign vessels that can come into this port, and allows only a few Soviet ships to carry on foreign trade.

We and They, p. 359

1. To discuss this question, the class may need to review parts of Chapter 16.

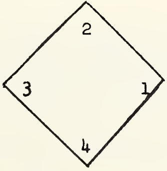
2. The answer depends upon the locality in which your students live. Formerly the United Stated imported manganese from the Ukraine and wool carpets from Mongolia.

EVALUATION EXERCISES

To Check on Your Students' Knowledge of Factual Information

Directions: Play baseball by answering each question correctly. Number 1 scores a single; number 2, a double; number 3, a triple; and number 4, a home run.

2. What is the name of the tent in which the nomads of Mongolia live? (yurt)



3. What is the name of an ancient oasis city in central Asia? (Tashkent, Samarkand, or Bukhara)

1. Which section of the U.S.S.R. is called the "Breadbasket"? (The Ukraine)

4. What is the deepest dry valley on earth? (Turfan Oasis, Sinkiang)

To See Whether Your Students Realize the Importance of the Ukraine to the U.S.S.R.

Directions: Cross out the incorrect words in each parenthesis to make the paragraphs true.

The Ukraine (is--is not) part of the Soviet Union. It is located to the (south--north) of the Black Sea. There is much farming, and (sugar cane--wheat) is an important crop. Farm machinery can be used because much of the land is (flat--hilly). (Coal--uranium) and (silver--iron ore) are mined, and industry is growing. The chief cities in the region are (Leningrad--Odessa) on the Black Sea, and the industrial cities of (Kharkov--Tomsk) and (Kiev--Moscow).

To Measure Whether Your Class Understands How the People of Central Asia Have Adapted to Their Natural Environment

Directions: In the following list, place an x after those things which show how people in the dry lands of central Asia have adapted to their environment.

grazing sheep (x)
farming in desert
living in yurts (x)
selling fish
digging cellars (x)
drying fruit (x)
living in igloos
farming at oases (x)
grazing llamas
fixing automobiles
weaving woolen cloth (x)
using camels (x)
lumbering
making butter and cheese (x)
making rubber shoes

To Check on Students' Knowledge of Important Places and Things

Directions: Identify each place or thing in a short, descriptive sentence.

Donets Basin	(The Donets Basin is an importanc coal field in the Ukrainian section of the U.S.S.R.)
Greater Volga Project	(The Greater Volga Project consists of a series of dams that store water for irrigation, generate hydroelectricity and aid navigation on the Volga River.)
Krivoi Rog	(Krivoi Rog is a city in the Ukraine located near deposits of iron ore and a site for iron and steel manufacturing.)
Astrakhan	(Astrakhan are sheep whose skins are valuable for making hats, coats, and scarves.)
Sultana	(Sultana is the name given to the small, sweet, seedless grape grown on the Turfan Oasis.)

STUDENT READING LIST FOR CHAPTER 17

NONFICTION

**Europe: The Great Trader, Aitchison, A. (Bobbs). "Little Mother Volga," a collective and a state farm, added to other stories of Soviet life, tell of the contributions made by this section of the U.S.S.R.

**The Land of the Russian People, Nazaroff, A. (Lippincott, 1944). A trip from Kiev to Samarkand shows how the people live on the steppes and deserts of the Soviet Union.

*Let's Read About Russia, Shapovalov, M. (Fideler, 1950). Through story and attractive pictures, the life of the Russian in the Ukraine, Caucasus, and central Asia is described.

**Asia, The Great Continent, Whittemore, K. (Bobbs). The vast, almost unknown steppes and deserts in the heart of Asia are home to many wandering tribes.

FICTION

**Quest in the Desert, Andrews, R. (Viking, 1950). The leader of an American expedition into the Gobi Desert finds he must be on constant guard against marauding Chinese bandits and power-mad local chiefs.

**Quest of the Snow Leopard, Andrews, R. (Viking, 1955). A rumor of a rare snow leopard is the reason for a long journey into unknown Asian lands by an American zoological expedition.

**Big Tiger and Christian, Muhlenweg, F. (Pantheon, 1952). On a trip to inner Asia, a Chinese boy and his white friend succeed in tracking down a group of thieves.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 17

How the Desert People Live, 1938 (mp, b&w, sound, 11 min, #42). Life of the people in the Turkestan and Gobi deserts is compared with the life of the people of the Sahara.

Land of Genghis Kahn, 1936 (mp, b&w, sound, 10 min, #60). A review of some aspects of life in Mongolia, with emphasis on the architecture and the costumes of the people.

North of the Himalayas, 1942, (mp, b&w, silent, 8 min, #27). The steppes of Siberia, the plains of Mongolia and Manchuria, and the mountains of Tibet are pictured.

People of Western China, 1940 (mp, b&w, sound, 11 min, #23). Reveals the influence of habits and customs of the past on the people in the dry lands in western China.

Russia, 1947 (fs, b&w, 55 fr, #37). Parts of this filmstrip show the life of the Soviet people on the steppes and deserts of Asia.

FEATURE: MANY SHEEP AND FEW PEOPLE (pp. 360-61)

The middle latitude dry lands of South America cover most of southern Argentina. Your students will see that the people are able to do little except graze livestock on huge ranches. There are three oases on which farming can be carried on successfully. These oases specialize in growing wine grapes. The extreme southern portion of Argentina is called Patagonia. Here sheep grazing is the chief occupation except where deposits of iron ore and coal have been found. The rest of Argentina is poor in these minerals, and therefore these deposits are important to the whole country.

……

FOR YOUR OWN READING

To find out more about Patagonia, you may want to consult the following book.

James, Preston, Latin America, Ch. 10, sections on Patagonia.

……

MAJOR QUESTION

The "Major Question" suggested for use with this feature points out the relationship between man and his natural environment. The information for answering is given for your convenience and use in the classroom.

Primary Objective:		Major Question:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.	→	How has natural environment limited activities in southern Argentina?

Northern Part	Patagonia
Grazing of sheep, goats, and low-grade cattle.	Contains large sheep ranches. Wool is chief product.
The oases at San Juan, Mendoza, and San Rafael specialize in growing grapes for wine.	Has sparse population.
	Iron and coal are important because Argentina has a scarce supply.

SUGGESTIONS FOR TEACHING

The picture on p. 360 can be used to point out similarities between Patagonia and the other middle latitude dry lands. You may want your students to draw a map showing the middle latitude dry lands of South America. The map on p. 360 can serve as a guide. Again, suggestions for reading previous chapters can be adapted for use with this feature. The "Checking Up" questions on p. 361 may be used as reading guides.

SUGGESTED ANSWERS FOR FEATURE (pp. 360-61)

Checking Up, p. 361

1. People of the middle latitude dry lands of South America make their living by

grazing cattle, goats, and sheep on the dry land. At some oases, grapes are grown to make wine. The chief product from Patagonia is wool.

2. Coal and iron ore are mined in Patagonia. These mineral deposits are important to Argentina because the rest of the country has poor iron and coal resources.

3. Few women and children live in Patagonia because life on the ranches is hard, crude, and lonely.

STUDENT READING LIST FOR FEATURE (pp. 360-61)

FICTION

**Land of Williwaws, Ross, M., (Houghton, 1934). A fourteen-year-old girl proves to her uncle and cousins that she is able to do scientific work in Patagonia and the Falkland Islands.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 360-61)

South Chile, 1945, (mp, b&w, sound, 21 min, #65). Despite the title, part of the film deals with the life and activities in Patagonia.

REVIEWING UNIT EIGHT

PLANNING THE REVIEW

In studying Chapters 16 and 17 and the feature and in doing projects and activities, your students have accumulated many facts about middle latitude dry lands. All of these facts contribute to their understanding of the people of the world, how they live, and why they live as they do. You can help your students to organize all of these facts and sort out the most important ideas by reviewing with them the unit as a whole.

Pages 361-62 of the textbook offer some exercises that you may want to use as a part of your review. 'A Broader View" on p. 361 points out that the middle latitude dry lands contain all the advantages of the moist continental lands with the exception of water. And water is the key to prosperity. The Soviet Union is supplying water to its dry lands near the Black and Caspian Seas in order to produce essential foods for its people. In the United States, only limited sections of the dry lands have been irrigated because we have enough farmland in less difficult regions to support our large population. Our dry lands also contain fertile soil and rich untouched mineral deposits. These resources can be used when we need them badly enough to provide the region with essential water.

Broad general understandings and relationships are brought out by the "Questions to Think About" on p. 362. In order to answer these questions, your students will need to recall information they learned in Chapters 16, 17, and the feature. Finally, "Your Geography Workshop" on p. 362 offers several suggestions for project work.

ADDING UP IDEAS

Some of the important factual information that you may want your class to remember might include:

1. The middle latitude dry lands lie between 30° and 55° north and south of the equator.

2. The middle latitude dry lands differ from the tropical dry lands because they have four seasons. There is also a greater span of temperature between daylight and dark hours. Blizzards are frequent, and winters are cold.

3. Most of the middle latitude dry lands are steppe regions which receive between 10"-20" of rainfall.

4. Mainly because of the low rainfall, the steppes have less than 25 people per square mile, the deserts less than two people per square mile.

5. Three natural factors of environment determine where people live in the middle latitude steppes and deserts.

   a. water: streams, springs, or an underground supply

   b. grass

   c. mineral deposits

6. In the steppe regions, wheat and other grain crops can be grown, but most crops

are raised by irrigation.

7. The main human activity is ranching or herding of livestock.

8. Mining has developed where valuable minerals have been found and transportation has been provided.

9. The location of cities in this region has usually been determined by:

   a. a large supply of water from a river

   b. the presence of rich mineral deposits

   c. natural passes through surrounding mountains or a natural route or routes across the steppes or deserts.

SUGGESTED ANSWERS FOR "QUESTIONS TO THINK ABOUT," p. 362

1. Most of the middle latitude dry lands are surrounded by mountains which shut out moisture-bearing winds. The mountain barriers limit rainfall.

2. Three factors which determine where people of the middle latitude dry lands live are: presence of fresh water, natural grasslands, and mineral deposits.

3. Irrigation and dry farming are used to grow crops in these dry lands.

4. Ranching or herding of livestock is important because livestock can be driven to water and can live on grasses which grow even with as little as 10" of rainfall.

5. Examples of cities in dry lands whose location has been determined by one of the following natural conditions.

Natural Condition	Cities
(a) A large supply of water from a river	Kiev and Rostov in U.S.S.R. North Platte, Nebraska
(b) The presence of a rich mineral deposit	Karaganda, U.S.S.R. Provo, Utah
(c) Natural passes through surrounding mountains or a natural route or routes across the steppe or desert.	Samarkand, U.S.S.R. Albuquerque, N.M. Denver, Col. Salt Lake City, Utah

WORKSHOP ACTIVITIES

Here are a few ideas to supplement those included in "Your Geography Workshop" on p. 362 of the textbook. The suggestions may be followed exactly as stated or they may be adapted to apply to a specific chapter or feature in the unit.

1. Draw a mural depicting the settlement of our West.

2. Write to the Chamber of Commerce of various western states for material about their tourist attractions.

3. Prepare oral reports about one of the following topics: the vanishing buffalo, Indians of the Great Plains, dust bowl, various national parks, oil fields near the Caspian Sea, ancient trade routes between Europe and the Orient, mountain climbing in Asia, Gobi Desert, dry farming, Greater Volga Project.

4. Make a chart or poster comparing the Mongols and the Bedouins.

5. Add the models of a yurt, pueblo, and Ukrainian farm house to the class museum.

6. Make posters about our various national parks.

7. Furnish samples of various minerals which can be added to the class museum.

EVALUATING THE UNIT

Your evaluation should determine how far your class has gone in acquiring the skills, factual information, and attitudes needed to answer the "Major Questions" and other questions on the chapters and features. The evaluation should also measure how well your students understand the geographic relationships involved and how much progress they have made in reaching the "Primary Objectives."

In your evaluation, you may wish to construct test items based on the reading material as well as the pictures, maps, and questions in the textbook. You may also want to use some of the suggestions, "Major Questions," or "Evaluation Exercises" in this booklet.

See also Unit Test Eight in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

UNIT NINE: LANDS AROUND THE POLES

BOOKLET #11

Your Own Look Ahead 1
Ch. 18: Forestlands of the North . 2
Ch. 19: Frozen Lands Beyond the Forests 12
Feature: A Land of Eternal Ice and Snow. 19
Reviewing Unit Nine 21

YOUR OWN LOOK AHEAD INTO UNIT NINE

Men have always been interested in the lands around the Poles, but few have ventured to live there permanently. Early in history, Irish seamen and Norsemen discovered the island of Iceland. This was the stepping stone for the discovery of Greenland and eventually the mainland of North America. After the discovery of North America, interest in these northern lands was stimulated by a search for riches and for shorter trade routes through the ice-packed Arctic Ocean. Until quite recently only a few trappers, miners, fishermen, and some native Eskimos and Lapps were permanent residents in this difficult environment.

The age of speedy airplane travel has again focused attention on the lands around the Poles. Frequently, the shortest intercontinental air routes cut across these lands. Airlines and pilots depend greatly on weather forecasts, and the weather observations stations in the northern lands provide a valuable service in supplying weather information. Meteorologists also consider it necessary to know the weather in these northlands for accurate forecasting in the United States. Military bases, radar stations, and air bases have been spread across the northern forestlands and the northern treeless lands of North America to guard the United States from attack by way of the North Pole. Valuable deposits of iron ore and uranium have been discovered. Your students will agree that this is an area worth watching.

Unit Nine provides your students with an opportunity to answer some more "Major Questions" which illustrate the "Primary Objectives" established in Booklet 1. The relationship between the "Objectives" and the "Major Questions" is shown in the following chart.

PRIMARY OBJECTIVES AND GENERALIZATIONS	MAJOR QUESTIONS
Objective: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples. Generalization: The peoples of the world depend on these areas for much of their timber, minerals, and furs.	Chapter 18, Question #1: How does the world depend on the northern forestlands?
Objective: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment. Generalization: Man has been able to adapt to the natural environment and to invent many machines to help him develop the area.	Chapter 18, Question #2: How have new inventions and equipment helped to develop the northern forestlands? Chapter 19, Question #1: How have people in the northern treeless lands adapted to their natural environment? Chapter 19, Question #2: Why has there been a growth of population in the treeless lands of the Soviet Union?
Objective: To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live. Generalization: Vast areas of the world are covered with northern forestlands and treeless lands. Many of these lands contain rich mineral deposits.	Feature (pp. 391-93), Question #1: Why is the world interested in the frozen continent of Antarctica?

AROUSING INTEREST IN THE UNIT

To set the stage for this unit, you may want to have your students look again at the pictures on pp. 18-21 of the textbook. By observing these pictures, your students will see that the region they are about to study is very different from any that they have studied thus far. They will be able to observe landscape, houses, methods of transportation, clothing, food, recreation, and occupations in the pictures. You can use these observations to stimulate class discussion.

Your students can locate the northern forestlands and the northern treeless lands on the map on p. 363 and on the World Climate Map on pp. 422-23. As your class reads the introductory material on pp. 363-64, they will discover that people other than Eskimos inhabit the northern lands. They will also find out that two distinct climatic regions will be discussed in this unit. The "Climate Facts," on p. 364, for Dawson, Canada, in the northern forestlands and for Barrow, Alaska, in the northern treeless lands can be compared with the climate data for your local community.

CHAPTER 18: FORESTLANDS OF THE NORTH

YOUR OWN LOOK AHEAD INTO CHAPTER 18

Vast evergreen forests cover much of Alaska, Canada, Norway, Sweden, Finland, and the U.S.S.R. In this northern forestland region, which some geographers call the "taiga," winters are long and cold. During this harsh season, rivers and lakes are choked with ice, and the ground is frozen and covered with snow. In the short, warm summers, the ice and snow melt, turning much of the land into swamps. Many eras ago, this area was scoured by the continental glacier, and the soil is poor and stony. Evergreen forests, however, seem to thrive.

Until recently, only a few fur trappers and hunters knew much about the interior of this area. Your students will discover, as they read this chapter, that airplanes, caterpillar tractors, bulldozers, hydroelectric power, and new scientific discoveries have aided man in utilizing rich mineral deposits and stands of timber. Today, the world depends on this region for much of its lumber and mineral needs.

Chapter 18 has a number of sub-divisions which will help your students to organize their thinking about northern forestlands.

1. "The Northern Forestlands," pp. 366-67, describes the long, cold winters and short, warm summers in the huge evergreen forests.

2. "Let's Look at Maps, pp. 367-69.

3. Timber for the United States and Canada, pp. 370-72, examines Canada's leading industry and shows how the United States depends on the northern forestlands for timber, pulp, and paper.

4. "A Land of Hunters and Trappers," pp. 372-74, follows an Indian fur trapper as he prepares for and makes his annual winter journey into the forest.

5. "A New Frontier for Mining," pp. 374-76, explains why remote locations, few people, no railroads, and short winter days, make mining operations very expensive in Canada.

6. "The Forests and Mines of Sweden," pp. 376-77, describes the careful lumbering and year-round mining and shipping of iron ore from Swedish mines.

7. "The Farmer-Foresters of Finland," pp. 377-78, discusses how Finland has developed her forests, waterways, and agriculture to make up for a lack of mineral resources.

8. "Old and New in the Soviet Forests," pp. 379-80, shows how the Soviet government is making use of the forestlands by improving transportation systems.

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FOR YOUR OWN READING

Additional background information can be found in the following books.

Regional Geography of Anglo-America, C. Langdon White and E. J. Foscue, Ch. 16, "The Yukon-Kuskokurin Basins" Ch. 10, "The Northern Continental Forests."

North America, J. Russell Smith and M.O. Phillips, Ch. 37, "The Yukon Valley"; Ch. 21, "The Great Northern Forest."

Geography of Europe, George Hubbard, Ch. 18, "Sweden"; Ch. 19, "Finland"; Ch. 24, "Northern Regions of the U.S.S.R."

Europe and the Mediterranean, Norman J. G. Pounds, Chs. 5, 6, & 7.

Asia's Lands and Peoples, George B. Cressey, pp. 323-26 and 359-68.

The U.S.S.R., James S. Gregory and D. W. Shave, Chs. 8, 9, & 11; also pp. 125-28.

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MAJOR QUESTIONS

The "Major Questions" pertaining to this chapter point out that the world depends on the natural resources of the forestlands and that man has developed new equipment to help him utilize these resources.

Primary Objective:
To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.

→

Major Question #1:
How does the world depend on the northern forestlands?

Country	Forests	Minerals	Furs
Canada	Lumbering is chief industry. Modern logging methods are used. Products include: timber, paper, nylon, and other wood products.	Found mostly on the Laurentian Plateau. 7/8 of the world's nickel. Iron ore deposits between Labrador-Quebec border.	Hudson Bay Co. controls most trapping. Indians do trapping. Furs are good quality. Furs include: fox, beaver, otter, muskrat, lynx, wolf, marten, and mink.
Sweden	Vast forest areas. Nothing wasted.	Rich iron ore. Mining continues day and night. Shipped through Swedish and Norwegian ports.	
Finland	Huge extent of forests. Exports lumber and wood products.		
U.S.S.R.	Lumbering main occupation. Modern lumbering methods are used. Products include: lumber, paper, pulp, plywood.	Many rich mineral deposits. Minerals include: gold, coal, iron, phosphates, nephelite, titanium, copper, nickel, and oil.	Government-controlled. Yakutsk is center. Furs include: marten, sabel, ermine, fox, squirrel, and bear.

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

→

Major Question #2:
How have new inventions and modern equipment helped to develop the northern forestlands?

Activities

Trapping and Hunting
1. Furs trapped in winter.
2. Travel on waterways by canoe.
3. Airplane now used as a major means of transportation.

Lumbering
1. Cutting goes on all year.
2. Rivers are used for transportation.
3. Airplane is used to locate forest fires.
4. Airplane is used to spot new valuable stands of timber.
5. Cat trains are used for transportation.
6. Ice-breaking equipment allows transportation by ocean.

Mining
1. Airplane used for prospecting and hauling supplies.
2. Cat trains are used to transport heavy equipment and minerals between mines and railroads.
3. Steamshovels and bulldozers are used when minerals are near the surface of the ground.
4. Spot lights are used for illumination at night and during dark winters
5. Electricity provides heat, light, and power for miners and machinery.
6. Ice-breaking equipment has helped bring transportation to inaccessible areas.

Recreation
1. Hunting and fishing are popular.
2. Airplanes make recreation spots accessible.

SUGGESTIONS FOR TEACHING

You might find it helpful to spend one class period discussing the northern forestland climate, which is described on pp. 366-67. In previous units, description of this type was contained mainly in the unit introduction. In this unit, however, each chapter covers a different climatic region, and the descriptions of climate are contained in the chapters themselves.

Some new suggestions for teaching are given below. You may want to incorporate them into daily lesson plans.

Arousing Interest in the Chapter

1 Many towns and small cities in the northern forestlands of Canada and Alaska have unusual names. Some of these names can be used to stimulate curiosity.

On the day you introduce Chapter 18, you might start the class period by telling your students that you are going to write some words on the board. "What do the words have in common? As you write the words on the board, have your students read and pronounce each one. It is advisable to write the names one at a time, calling on a student to say each name. If you start with those that do not suggest the name of a town or city, more interest can be stimulated. However, as the list progresses, you will want to include some familiar cities so that your class will be able to guess what the words have in common.

A list similar to the following could be used:

1. Moose Factory
2. Whitehorse
3. Resolution
4. Providence
5. Yellowknife
6. Eagle
7. Circle
8. Fortymile
9. Shamrock Dome
10. Moosehide
11. Big Salmon
12. Lastchance
13. Poker Creek
14. Woodchopper
15. Chicken
16. Livengood
17. Burnt Paw
18. Old Crow
19. Twenty-two Mile Village
20. Churchill
21. Gander
22. York Factory
23. Dawson
24. Yukon

The last five names in the list may be familiar to some of your students, who should be able to infer that all the words in the list are names of towns and cities. You can add that these are names of towns or cities in Alaska or Canada. All of the names have still another thing in common. They are all located in the same climatic region. "What do some of the names suggest to you?" "What do you think the people do for a living in some of these towns and cities?" Questions such as these can start your students thinking about activities and living conditions in the northern forestlands.

2. The large colored picture on pp. 18-19 can be used to give your students an idea of the appearance of northern forestlands. This picture can also be used to stimulate class discussion. The lake, the evergreen forests, the lack of people, and the apparent remoteness of the region evident in the picture can be used as discussion starters.

Lets Look at Maps (pp. 367-69). This map study introduces your students to the polar map. Many students find it difficult to use this map because its orientation is different from that of most maps with which they have worked. Before guiding your students in the map activities, have them read about the polar map on p. 367. You may want to discuss this material with the class.

While working with the polar map, your students will have an opportunity to review many of their previously learned map skills and to learn many new ones. The chart may help clarify these reviewed and new skills.

Map Skills

Skills	Review	New
Direction	N,S,E,W Latitude	N,S,E,W (polar map)
Distance	Scale recognition of differences	
Symbols	Continents, ocean, sea, rivers (and river courses), lakes, cities, political boundaries	
Location		North Pole, Arctic Circle
Legend	Shading to indicate rainfall and population density (relative differences)	Hatching to represent forestlands and treeless lands White area to indicate ice cap
Comparison & Inference	Inference about location of cities	Comparison of three kinds of maps Inference about type of precipitation Inference about value of polar map

Suggested Answers for "Let's Look at Maps"

1. Directions are given which help your students locate the Arctic Circle and northern forestlands.

2. This map gives a truer picture of the lands around the North Pole. The North Pole is in the center, and you look at the map much as you would look at the earth if you were high in the air above the North Pole. This map is very different from the "World Climate Map" on pp. 422-23. The polar map does not picture the entire world. The parallels are circles, and the meridians all come together at the North Pole. The polar map on p. 369 uses hatching to show climatic regions while the map on pp.422-23 uses color.

   The polar map is also different from the continent map on p. 426 because it pictures more than one continent. It also shows the North Pole area more clearly than does the map of North America. Again color is used on the continent map to show climate, while hatching is used on the polar map.

3. Alaska and Canada in North America contain forestlands.

4. The Nelson, Mackenzie, Peace, and Yukon Rivers flow across the North American forestlands. The Nelson flows into Hudson Bay. The Mackenzie flows into the Arctic Ocean. The Peace flows into the Great Slave Lake. The Yukon flows into the Bering Sea. Lake Athabaska, Lake Winnipeg, Great Bear Lake, and Great Slave Lake are located in the forestlands of North America.

5. Anchorage, Fairbanks, and Churchill are located in the northern part of the forestlands. Sudbury is located in the southern part. Anchorage and Fairbanks are located in Alaska. Churchill and Sudbury are in Canada.

6. Encourage your students to follow the directions to locate the forestlands of Eurasia.

7. Four countries of northern Europe which contain forestlands are Norway, Sweden, Finland, and the U.S.S.R. Small parts of Mongolia and China also contain northern forestlands. The Pechora, Ob, Yenisei, and Lena Rivers flow across these forestlands. The Pechora River flows into the Barents Sea, and the others flow into the Arctic Ocean.

8. The cities of the Eurasian forestlands are on rivers, lakes, or the seacoast because these water bodies are used for transportation.

9. Most of the precipitation in these lands comes in the form of snow.

10. The population map shows that few people live in these northern forestlands.

Reading to Fill in a Chart (pp. 370-80). A chart can serve as a good summary of factual information and can also show some of the geographic relationships that exist. You may want to have your students fill in a chart as they read this chapter. You can either mimeograph the chart-form and distribute it before your class begins to read the chapter, or you can draw the chart-form on the board and have your students copy it on a sheet of paper.

The chart that is given here, with the suggested supporting information filled in, is based on the reading material about lumbering in Canada (pp. 370-72) and about mining in Canada (pp. 374-76). If you want the chart to cover all the natural resources of northern forestlands, you will also want to have your students fill in information about hunting and trapping (pp. 372-74). Similar charts can be constructed to organize the reading material dealing with the northern forestlands of Sweden, Finland, and the U.S.S.R. When the charts have been completed and checked, they form a good, concise summary of the important parts of the chapter.

All the starred information and page references indicated on the charts should be left blank on the chart-form which you give your class. Students can supply this information as they read. One star indicates answers that might be expected from your *reluctant students. Two stars indicate answers which your **average students may supply; and three stars show the type of material that your ***advanced students can note.

In order to get all of your students started properly, you may want to fill in several of the supporting facts as the class works together. After everyone understands that he is to complete the chart by adding information gathered from the reading, you may let your students work individually.

Chart Title: Natural Resources of the Northern Forestlands of Canada

	*Forests, pp. 370-72	*Minerals, pp. 374-76
Importance	* Leading Canadian occupation, p. 370 ** Provides additional income for farmers, p. 370 ** People of the U.S. depend on the timber, p. 370 *** 1/5 of railroads' business is hauling timber, p. 370	* One of the richest mineral areas in the world, p. 374 ** Area contains nickel, copper, gold, silver, iron ore, and platinum, p. 374 ** Iron ore in Labrador-Quebec fields very rich, p. 374 *** Mines 7/8 of world's nickel, p. 374
Method of Acquiring	* Work mostly in winter, p. 370 and p. 371 ** Cut trees in early winter, p. 370 ** Dragged to river when ground is frozen or covered with snow, p. 371 *** Lumbermen are paid according to the amount of timber they cut and haul, p. 371 * Logs are floated down stream to sawmill when the ice thaws in the spring, p. 371 ** Log drivers break up the log jams, p. 371 *** Sawmills are usually located where a small stream flows into a large river. The small stream is used to transport the logs, and the river allows large ships to haul away the mill's products, p. 371	* Steam shovels dig the ore when it is near the surface, p. 374 ** Some open-pit mining, p. 374 ** Some shaft-tunnel mining, p. 374 *** Iron ore is mined by the open-pit method, p. 374 * Cat trains haul the heavy machinery and ores between the railroad or waterway and the mine, p. 375 * Airplanes carry other supplies, p. 375 ** Mapping and prospecting are done by air, p. 375 ** Mining is expensive because high wages must be paid the workers, and everything must be brought long distances, pp. 374-75 *** Hydroelectricity is used for lighting, heating, cooking, and power, p. 374
Uses	* Timber and lumber, p. 370 * Paper, nylon, other wood products, p. 370 ** Mine supports, p. 370	** Used by Canadian and U. S. manufacturing industries ** Used by other countries in the world

The completion of the chart on the natural resources of Canada's northern forestlands may take several days. You may want to have some of your students read parts of their charts in class. Errors and misconceptions can be corrected through class discussion and your guidance.

SUGGESTED ANSWERS FOR CHAPTER 18

Checking Up, p. 367

1. Some of the handicaps to plant growth in the northern forestlands are poor and rocky soil, lack of minerals in the soil, poor drainage, flooded land in spring, and long, bitterly cold winters.

2. The people of the northern forestlands take advantage of the bitter winters by using the frozen ground and waterways for transportation and traveling.

3. A muskeg is a kind of swamp. The ground is wet and spongy and will not support much weight. Traveling in the summer is dangerous because anyone who gets caught in a deep muskeg will sink down and disappear.

Checking Up, p. 372

1. We depend upon Canada's northern forestlands for much of the wood pulp used in our paper and rayon industries. We also buy paper from Canada. Forests help Canada's tourist industry because they attract hunters, campers, and fishermen.

2. Canada has very large pulp and paper industries because it has vast areas of northern forestlands which furnish the necessary raw materials.

3. Many pulp and paper mills are located on small streams and other larger bodies of water because streams are used to bring the logs to the mills and to carry away the finished products. The mills need plenty of hydroelectric power, and Canada's swift streams and waterfalls furnish it. Pulp and paper mills require much pure, soft water in the processing, and the streams furnish this also.

Checking Up, p. 374

1. The waterways of the northern forestlands are important to the Indian fur trapper because many times they are the only routes he can follow. The airplane is changing the methods of the Hudson's Bay Company because it is now used to supply remote trading posts. Many trappers use the airplane to get to their trapping grounds. Planes pick up trappers' furs two or three times a year and take them to market.

2. Portages are both dangerous and difficult because heavy loads must be carried across muskegs. The trapper must watch his footing or he may sink waist deep into the mud. Portages are necessary to get the canoe and supplies past dangerous rapids and falls in the streams.

3. The animals in the northern forestlands have rich coats of fur to protect them from the cold winter. The cold climate makes the fur thick and long-haired. There is also such a variety of food for the animals that they are very healthy and grow coats of rich, glossy fur.

Checking Up, p. 376

1. Mining is expensive in the northern forestlands because everything needed for mining must be brought into the region. High wages must be paid to attract and hold the miners; electricity must be furnished; and comfortable living quarters must be provided.

2. Miners not only use the airplane to bring in most of their supplies and freight but much prospecting is done from the air by aerial photographs. Airplanes have also helped the lumbering industry by helping to spot forest fires and locating valuable cutting areas for the lumbermen.

3. Cat trains are lines of sleds which are pulled over the snow or ice by large caterpillar tractors. These huge tractors are slow, but they can pull heavy loads. They haul much of the heavy equipment, tons of food, oil, kerosene, clothing, and other necessities to the mines, the lumber camps, and the trading posts.

Checking Up, p. 377

1. The people of Sweden keep up the number of trees in their forestlands by planting new trees when a section has been cut, leaving selected trees to reseed themselves, thinning the forests by removing weak or defective trees, and planting new trees in thin growths. "Natural reforestation" means that a number of selected parent trees are left scattered through a lumbering district so that they will reseed the area and produce a new forest.

2. Swedish miners use electricity for lighting, heating, cooking, and running machinery and railroads.

3. Two special problems faced by the Swedish miners are: (1) for a period of 25 days during the winter, the sun does not shine and electric flood lights must be used; and (2) in winter, ice closes every Baltic port north of Stockholm. Ore trains must be sent over the mountains to the Norwegian port of Narvik, which is ice-free all year.

Checking Up, p. 378

1. Three resources of the Finnish forestland are forests, numerous lakes and streams for transportation, as well as waterfalls and rapids to generate hydroelectric power. The forestlands are lacking in minerals.

2. The waterways serve as highways through the forestland, and they are used to supply hydroelectricity.

3. The Finnish farmer fights frosts by keeping brush heaped high along the edges of his fields. At the first sign of a frost, he sets fire to the brush to fight the cold.

4. Strawberries, blueberries, and small red berries that taste like our cranberries Grow wild and are very important to the Finns.

Checking Up, p. 380

1. Forests, fur-bearing animals, and minerals are three important resources of the northern forestlands of the Soviet Union.

2. The Soviet Government has built canals, deepened waterways, cut new roads, and imported modern logging equipment to modernize its lumbering industry.

3. Opening the northeast passage gave the U.S.S.R. an ocean passage in this region. As a result, ships could take forest products to market and bring in the needed equipment and supplies.

Questions to Think About, p. 380

1. The Indian trapper prepares for his winter in the northern forestlands by buying his outfit for the season. This consists mainly of food, clothing, and ammunition. In some years, he also buys new traps, a gun, a portable stool, or some pots and pans.

2. There have been great changes in the northern forestlands of Canada during the past 35 years. Both lumbering and mining are being carried on in remote regions which in the past were visited only by fur trappers. The airplane and the cat tractor have helped in the development of these lands.

3. Everyone is interested in conserving forests in Sweden. Sweden has the forests and streams necessary for lumbering. A variety of products are made from the trees; nothing, not even the sawdust, is wasted. Mining is important because Sweden contains some of the richest deposits of iron ore in the world. Mines are open 24 hours a day and 365 days a year even through the dark and cold winter.

4. The people of Finland have fitted their work to the natural conditions of their country by growing crops that will grow in the short growing season and by gathering great quantities of wild berries when it is summer. In the winter, most farmers turn into lumbermen and work in the vast forest area.

5. The "northeast passage" is a route through the Arctic Ocean along the northern coast of the U.S.S.R. The route is important because it gives access to the forestlands in northern Russia and Siberia. Lumber and minerals can be transported much more easily along this route.

6. In the winter, the northern forestland is very cold, and snow and ice cover the ground. Winter is the best time to travel because the swampy land is frozen, and ice covers the rivers and lakes. Spring is short and comes late. Ice in the rivers and lakes breaks up. The lumbermen float their timber to the sawmills after the spring thaw. Summer is short but fairly warm. The ground thaws and muskegs make travel dangerous. There are swarms of insects, and people must wear thick gloves on their hands and keep their faces veiled. In some places farmers are able to take advantage of the long days and short growing season to raise a few crops. The fall, like the spring, is short and may come very early. The trappers prepare to leave for their winter trapping grounds, and everyone prepares for the coming winter.

We and They, p. 380

Your students can best answer these three questions by comparing life in their local community with living in the northern forestlands. Many of the answers can be compiled through class discussion.

EVALUATION EXERCISES

To Check on Your Students' Knowledge of Factual Information

Directions: Spell the word down by putting the first letter of your answer in the blank space before each number. The completed word is an important natural resource of the northern forestlands.

F 1. City in the northern forestlands of Alaska. (Fairbanks)
O 2. Mineral in its raw or natural state. (ore)
R 3. Another name for a caribou. (reindeer)
E 4. Type of trees in northern forestlands. (evergreen)
S 5. Animal valuable for its fur. (silver fox)
T 6. Name of the occupation of one who hunts for furs. (trapper)
S 7. European country with northern forestland climate. (Sweden)

To Determine Whether Your Students Realize the Value of Natural Resources in Northern Forestlands

Directions: Place an x after each item in the following list which you would probably find in northern forestlands.

maple trees
limestone
oak trees
sheep
anteater
coal (x)
silver (x)
llamas
silver fox (x)
spruce trees (x)
redwoods
copper (x)
pine trees (x)
camels
nickel (x)
nitrate
oil (x)
uranium (x)
iron ore (x)
mink (x)
elephants
martens (x)
lion
gold (x)

To Measure Your Class's Understanding of the Polar Map

Directions: Use the polar map on p. 369 of your textbook to answer each of the following questions.

*1. What direction would you travel to get from the North Pole to Anchorage, Alaska? (south)
*2. What is the latitude of Oslo, Norway? (60°N.)
*3. What city would you come to first if you went due east from Oslo, Norway? (Leningrad, U.S.S.R.)
*4. What is the longitude of Archangel, U.S.S.R.? (40°E.)
**5. What is the latitude of the Arctic Circle? (66½°N.)
**6. What direction is Yakutsk, in the U.S.S.R., from the Arctic Circle? (south)
***7. What direction would you travel to go from Nome to Barrow, Alaska? (northeast)
***8. What direction is Churchill, Canada, from Juneau, Alaska? (east) From Hebron, Labrador? (west)

To Test Your Students' Knowledge of New Vocabulary Words in This Chapter

Directions: Match each statement in Column I with the correct word in Column II. Use numbers and letters only.

Column I	Column II
1. A swamp in the northern forestlands (d)	a. Glacier
2. A line of sleds pulled by a tractor (f)	b. Reforestation
3. Mining when ore is near the surface of the ground (c)	c. Open pit
4. A slow-moving mass of ice (a)	d. Muskeg
5. Carrying a canoe and supplies around a waterfall or rapids (e)	e. Portage
6. Planting new trees in places where others have been cut down (b)	f. Cat train

STUDENT READING LIST FOR CHAPTER 18

NONFICTION

*Forests and Fiords, Bailey, B. (Beckley-Cardy, 1952). A Danish farm boy journeys over most of Scandinavia from the flat lands of Denmark to the forest-covered mountains and fiords near Bergen, Norway.

*Life in Europe: Norway, Malmstrom, V., & R. (Fideler, 1955). The mountains, fiords, forests, fisheries, and villages are part of the background that shows the Norwegian people at work and play.

**The Land of the Russian People, Nazaroff, A., (Lippincott, 1944). Life in the forestland of Siberia is shown to be very important to the Soviet Union.

**The Young Traveler in Sweden, Proctor, G., (Dutton, 1953). Historic, scenic, and prominent landmarks are investigated by the young travelers in their trek from the Baltic Sea to Lapland.

*Let's Read About Russia, Shapovalov, M., (Fideler, 1950). A wilderness of trees and cities of wood form a picture of life in the forest regions of Siberia.

***Here Is Alaska, Stefansson,E., (Scribner, 1943). Describes the life of the settler, the Indian, and the Eskimo and pictures Alaska as a land with a future.

*Let's Read About Alaska, Tompkins, S., (Fideler, 1949). The Alcan Highway, life in the city, frontier farming, and children in school are all a part of the complex of Alaska.

FICTION

**Pirates of the Icy Strait,Bell,M.(Morrow,1943).On what started out to be a routine salmon catch, an Alaskan fishing boat prevents the escape of a pirate seiner.

**White Gold in the Cassiar, Crisp, W., (Dodd, 1955). A boy scout becomes involved in an unusual kind of mining in northern British Columbia.

**Hudson Bay Express, Davis, R., (Holiday, 1942). Two enterprising boys turn a dog-sled freight and passenger service into a booming business.

**Talking Tree , Desmond, A., (Macmillan, 1949). An Alaskan Indian boy endures a severe test of perseverence to get a new totem pole for his clan.

*Norwegian Farm, Hamsun, M., (Lippincott, 1933). A humorous story of children growing up in the great Norwegian out-of-doors. It proves that people are much the same everywhere.

***A Hundred Bridges to Go, Hewes, A., (Dodd, 1950). A young pilot, grounded because of night blindness, turns his strength to the frantic efforts to build the Alcan Highway.

*The Defender, Kalashnikoff, N., (Scribner, 1951). A self-appointed protector of mountain rams proves the saying, "Everywhere there is life, and everywhere there are warm human hearts" -- as demonstrated by the Yakut of northeastern Siberia.

*My Friend Yakub, Kalashnikoff, N., (Scribner, 1953). Yakub was an artist and a great story teller. He brings joy to a boy growing up on a small farm in the Siberian forests.

***Sled Dog of Alaska, Landru, J., (Dodd, 1953). Racing sled dogs is great sport in Alaska. Lance, a high school student in Fairbanks, tries to find himself a champion dog.

**Call of the Wild, London, J., (Macmillan, 1912). Buck, a sled dog in the Yukon, hears the ancestral call of the wild and for a while he obeys.

***Ride Out Singing, Loomis, A., (McGraw, 1951). When she arrives at her new home in the Northwest Territory of Canada, Phyllis learns what to do in case of fire, blizzard, and run away horses.

***Pirate of the North, McCracken, H., (Lippincott), 1953. A curse on those who searched for gold and furs failed to stop Jack Lauson in his year-long search for riches.

*Snow Treasure, McSwigan, M., (Dutton, 1942). Little did the Nazi Army realize that the Norwegian children were actually sledding on solid gold sleds.

*Rick of High Ridge, Machetanz, S., (Scribner, 1952). Rick makes a long trip up the Alcan Highway to try his hand at farming a jinxed,hard-luck tract of land in Alaska.

**Adventure North, Pinkerton, K., (Harcourt, 1940). Ann Jackman and her family move to northern Ontario and find they have a lot of new things to learn about the north woods.

**Fox Island, Pinkerton, K., (Harcourt, 1942). Thieves threaten to steal a rare pair of silver foxes which the Jackmans' had just captured for their fur farm. (Further excitement for the Jackmans' and their fur farm is seen in Farther North, 1944, and Silver Strain, 1946.)

**Happy Times in Norway, Undset, S., (Knopf, 1952). When the Germans invaded Norway in 1940, the happy times left; all knew, however, that they would return some day.

*Johnny Blossom, Jwilgmeyer, D., (Pilgrim, 1948). A Norwegian boy named Johnny had trouble keeping out of a scrape, but he was courageous and loyal.

AUTOBIOGRAPHY

**Trap Lines North, Meader, S., (Dodd, 1936). A first-hand account of a trip into the north country of Canada in search of furs.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 18

Alaska, 1950 (fs, b&w, 70 fr, #23). The climate, untapped resources, lumbering, fishing, fur farming, agriculture, and tourist trade.

Angermanland, 1952, (mp, b&w, sound, 15 min, #26). Mountains and rivers form the geographic beauty of this region in Sweden. Lumbering and fishing make up its industries.

Canada's Awakening North, 1951, (mp, b&w, sound, 32 min, #49). An appraisal of the social and economic development of the Mackenzie District in the Northwest Territory.

Canada's New Farmland, (Peace River District, Alberta), 1949 (mp, color, sound, 20 min, #65) and 1955 (fs, b&w, 45 fr, #65). Clearing the land, planting the crops, and building a new community are activities of present-day frontiersmen.

Farmer-Fisherman, (Norway), 1948 (mp, b&w, sound, 20 min, #65) and 1955 (fs, b&w, 50 fr, #65). Long winters and poor land make it necessary for the people to farm in the summer and fish in the winter.

Finland, The Land and Its People, 1952 (fs, color, 42 fr, #58). Deals with the economy of Finland as related to the natural resources.

Frontier Farmers of Alaska, 1955 (mp, color, b&w, sound, 18 min, #9). Shows dairying, poultry raising, and general farming as well as recreational and community activities.

Fur Country, (mp, color, sound, 22 min, #16). An account of Canada's oldest and most primitive industry around the Moose Factory region of Hudson Bay.

Inside Russia (Siberia), 1949 (mp, b&w, silent, 10 min, #23). Scenes along the Trans-Siberian Railroad, including home life, schools, health projects, agriculture, and recreation.

Land for Pioneers, 1944 (mp, b&w, sound, 14 min, #40). A survey of the natural resources of the forest and tundra region of the Mackenzie and Peace River Valleys of Canada.

Life in Northern Lands (Norway), 1954, (mp, color, b&w, sound, 11 min, #20). A Norwegian family near Bergen show how people adjust to the demands of climate and topography.

New North, 1946, (mp, b&w, sound, 10 min, #49). The Alaska Highway opened up new land in the Yukon Territory to miners, farmers, tourists, and sportsmen.

Norway, The Land and Its People, 1952 (fs, color, 39 fr, #58). Depicts how the natural environment has influenced the customs, dress, activities, and economy.

Our Land--Canada, 1949 (set of 6 fs, b&w, #49). "British Columbia" and "Yukon and Northwest Territory" show location, principal cities, and industries in each region.

Pioneer Life in Upper Canada, 1950 (fs, b&w, 39 fr, #49). The story of the settling of the Canadian north country.

Russia, 1947 (fs, b&w, 55 fr, #37). Parts of this filmstrip show the life of the Soviet people in the forests of Siberia.

Siberia, 1937 (mp, b&w, silent, 30 min, #23). Shows the developments in this vast country under Soviet policies. Emphasis is placed on the Lake Baikal region.

This Is Finland, 1953 (mp, color, b&w, sound, 27 min, #26). Depicts the people and the country as well as industries, architecture, and art.

We Visit Sweden, 1951 (fs, color, 24 fr, #24). Scenes of people, buildings, industries, and the kinds of work are shown to give a better understanding of the people.

CHAPTER 19: FROZEN LANDS BEYOND THE FORESTS

YOUR OWN LOOK AHEAD INTO CHAPTER 19

Few people have been able to adapt more completely to a difficult environment than have the Lapps and Eskimos of the northern treeless lands, sometimes called the "tundra." The skill of these people in adapting to their environment was first realized when Arctic exploration was at its peak. Around the turn of the century, there was a renewed interest in reaching the geographic poles of the earth. Most expeditions were doomed to failure, some even perished because the leaders did not understand basic Arctic survival.

Admiral Robert E. Peary, whose life-long dream was to stand on the North Pole, spent almost twelve years living with the North American Eskimos. He learned all he could about their methods of doing things. It is not surprising to read in history books that Admiral Peary reached the North Pole by using Eskimo clothing, sleds, and dogs as well as Eskimo techniques of travel and survival. Within three years of Peary's fete, Roald Amundsen, using similar Eskimo techniques, reached the South Pole. More recently, the United States military forces have used many of the Eskimo's ideas about clothing in making uniforms for use in frigid weather.

In Chapter 19, your class will have an opportunity to visit the Eskimos of North America and the Lapps of Eurasia to see how each of these groups cope with the eternal cold.

This chapter is divided into a number of sections to aid your students as they read.

1. "Let's Look at Maps," p. 382

2. "The Northern Treeless Lands," pp. 383-85, describes climatic conditions and explains how wild life can thrive on the tundra.

3. "Northern Peoples of North America," pp. 385-88, tells about the life of the Eskimo and how he is able to exist through his skillful adaptation to his natural environment.

4. "The Treeless Lands of Northern Eurasia," pp. 388-90, visits the Lapps and their reindeer herds as well as the northern treeless lands of the U.S.S.R.

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FOR YOUR OWN READING

The following books will furnish background material about this area.

White, C. Langdon, and Foscue, E. J., Regional Geography of Anglo-America, Ch. 19, "The Tundra."
Smith, J. Russell, and Phillips, M. O., North America, Ch. 2, 38, and 39.
Kimble, George H. T., and Good, Dorothy, Geography of The Northlands.
Gregory, James S., and Shave, D. W., The U.S.S.R., pp. 122-25, 283, 306, 309-17, and Ch. XI.
Stefansson, Vilhjalmur, Arctic Manual.
Russell, R. J., and Kniffen, F. B., Culture Worlds, Ch. 3, "Polar World Cultures."

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MAJOR QUESTIONS

The "Major Questions" pertaining to this chapter show how man has been able to adapt to and change certain aspects of the natural environment in the northern treeless area. Two "Major Questions" and their answers are listed below. You will probably want to stress these with your class.

Primary Objective:		Major Question #1:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.	→	How have people in the northern treeless lands adapted to their natural environment?

Needs	Eskimos	Lapps
Housing	Summer: live in tents made of skins or canvas Winter houses made of material that is close at hand: snow blocks, sod, stone, driftwood, and lumber	Summer: live in tents made of skin or wool Winter houses more permanent, partially underground, and made of sod, earth, or stone
Occupation	Fishing in waters near their homes Hunting and trapping of the birds and animals of the tundra	Herding of reindeer: move reindeer herds from place to place searching for grass, lichens, and moss
Clothing	Parkas made of seal or fox skin Boots made of whale or seal skin Mittens and trousers made of bear skin Bones used for needles and sinews for thread Clothing is made wind and water proof	Parkas made of fur Tunics made of colored wool Trousers are tight fitting and made of wool Moccasins are made of fur and are stuffed with Arctic grass Leggins made of fur which protect their legs from the cold Caps are helmet-like and made of wool
Food	Mostly meat and seafood: seal fat, fish, whale, walrus, polar bear, fox, caribou, and many others	Reindeer stew, cheese and milk They buy coffee, flour, sugar, vegetables, and potatoes
Equipment	Kayak: made of skins covering a frame of bones or wood; light and fast for quick travel over the water; constructed so that the paddler can overturn and not fill the boat with water Dog sled: pulled by team of huskies	Pulkas or reindeer sleds are made without nails; the parts are fastened together by leather thongs; each part can be easily replaced Skis used for traveling when ground is covered with snow

Primary Objective:
To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

Major Question #2:
Why has there been a growth of population in the treeless lands of the Soviet Union?

Reasons

1. Improvements in transportation: Building of railroads Opening of Arctic Sea route Airplane 2. Opening of new mineral deposits 3. Improvement in fishing centers: Motorboats Modern refrigeration Canning factories	4. Growth of Murmansk: Ice-free harbor all year At the end of the Arctic Sea route Railroad connection with Leningrad Canning factories Shipbuilding center Gathering point for lumber and minerals

SUGGESTIONS FOR TEACHING

The reading material in this chapter is divided into three sections which you may want to use as daily reading assignments.

Some new suggestions for planning your daily lessons are given below. You may also want to use some of the previous ideas which worked well with your class.

Arousing Interest in the Chapter

1. Perhaps some of your students had brothers or parents who spent some time in the northern treeless lands as members of the armed forces. These students might be able to bring to class some souvenirs from the Eskimo people. Dolls, parkas, mittens, art work, and boots will create interest among most of your students.

The class discussion can be centered on the use of the various articles. Your students might be curious to learn how the Eskimos sew and make their clothing waterproof and windproof. "How do these people live?" "What do they eat?" "Do all Eskimos live in igloos?" Questions such as these will direct your students' attention toward some of the things they will learn in this chapter.

2. Many of your students are probably interested in the defense lines, the radar stations, and the weather outposts that are scattered throughout the North American tundra. You might have some of your students prepare special reports about these places and present their findings to the rest of the class.

Our Air Force base at Thule, Greenland, was built and is being maintained despite the severe handicaps of the northern treeless climate. It was built in Greenland to prevent a surprise attack by any hostile group via the North Pole. Moscow is just 2,400 miles away from Thule.

"How have Americans learned to adjust to this type of environment, which is so different from any that we know?" The men have to adjust first to the alternate periods of lightness and darkness. During July and August there is no darkness of any kind. The so-called "nighttime" is as bright as noon. Each sleeping room has one small window with a shade which keeps out the light. In the wintertime, there is no light at all, and the window is not needed.

The men live in barracks partly below the surface of the frozen ground. The barracks are protected from the outside cold by insulating material. Modern equipment, good food, and recreation rooms help to keep the men happy. Indoors, the temperature is kept at about 68°-72°, while the August temperature outdoors might be below zero. The temperature is even colder in winter, and the force of the wind blowing off the Greenland ice cap reaches 125 miles per hour or more.

It costs $1,000,000 per day to maintain this air base. This is a great deal of money. But when you stop to think that everything from matches and toothpicks to steam shovels and bulldozers is imported from 3,000 miles away, you can easily see why the cost is so great. The area contains nothing which can be used by the air base except gravel and stone.

Let's Look at Maps (p. 382). After your students have read the introduction on p. 381 and examined the map and picture on p. 382, they will be ready to start the map study. In this map study, your students will have an opportunity to practice using the polar map on p. 369. Some new map skills are introduced.

Map Skills

Skills	Review	New
Direction	N,S,E,W (polar map)	
Distance	Scale--recognition of differences	
Location	Arctic Circle North Pole	
Symbols	Islands, political boundaries, oceans, seas, rivers, cities, peninsula, continents	
Legend	Shading to indicate rainfall and population density (relative differences) Hatching to indicate forestland	Hatching to indicate treeless lands Shading to indicate ice cap
Comparison & Inference	Precipitation of various regions compared Location of two climatic regions compared Inference about the location of cities	

Suggested Answers for "Let's Look at Maps"

1. The northern treeless lands are north of the northern forestlands.

2. Encourage your students to follow the directions to locate Greenland and the Greenland ice cap.

3. Alaska, Canada, and Greenland in North America have northern treeless lands. The Bering Sea, Bering Strait, Baffin Bay, and Davis Strait surround these lands. The Yukon and Mackenzie Rivers flow through the area. Cities and towns

are located near the seacoast because the waterways are the chief means of transportation.

4. Norway and the U.S.S.R. in Eurasia have some northern treeless land.

5. There is less precipitation in the treeless lands than there is in the northern forestlands. There is less precipitation over the ice cap on Greenland than there is in the northern forestlands and over much of the treeless lands.

6. This activity requires your students to compare the population density of the northern treeless lands and forestlands with the population of the ice cap.

Reading for Details (pp. 383-90). Before your students read this chapter, you might prepare a list of questions requiring detailed answers to be gathered from the reading material. These questions might be used in conjunction with the "Checking Up" questions on pp. 385, 388, and 390.

If the questions are presented just before your class begins to read, your students can practice their skimming skills in order to find the answers. On the other hand, you may prefer to have your students find the answers to your questions after they have read each section of the chapter.

The following questions require your students to read for details and can serve as examples for questions that you might want to construct. The starring system is used to help you take care of individual differences within your class. Page references and answers are furnished.

*1. When does frost come to the northern treeless lands? (at any time, p. 383)
*2. What is the average winter temperature in the treeless lands of Siberia? (close to -50°, p. 383)
*3. What type of duck is eaten by the Eskimos? (eider duck, p. 385)
*4. What takes the place of butter and vegetables in the Eskimo's diet? (seal fat, p. 386)
**5. How is the caribou insulated against the cold? (air cells in the skin, p. 384)
**6. What kind of paddle does a kayak paddler use? (double-bladed, p. 386)
**7. What skins make good coats for the Eskimo? (fox, p. 387)
**8. How do the Lapps flavor their coffee? (with reindeer cheese, p. 389)
***9. What kind of grass makes good fodder for the animals of the treeless lands? (a kind of timothy grass, p. 384)
***10. What color is the Ptarmigan in summer? (brown or gray, p. 385)
***11. What do the Lapps' hats resemble? (helmets, p. 389)
***12. What improvements have been made in water transportation in the northern treeless lands? (motorboats, pp. 388 and 390)

To summarize the chapter, you may want to use the three exercises included in "Reviewing the Chapter" on p. 390.

SUGGESTED ANSWERS FOR CHAPTER 19

Checking Up, p. 385

1. The plants of the northern treeless lands show the effect of the cold, winds, and long periods of darkness in many ways. Trees are dwarfed or do not grow at all. Most of the plants hug the earth and grow with very short stems. Microscopic plants grow on the surface of melting snow. The plants of the tundra are useful to men because they can be used as food and as a soft stuffing for men's boots and mattresses.

2. The caribou is fitted for his life in the Far North because he eats lichens, mosses, and shrubs. His skin contains air cells which act as insulation against the cold, and his thick layer of fur is waterproof. His hoofs make good snowshoes and enable him to dig beneath the snow for food.

3. The walrus, seals, polar bears, the narwhal, snails, shrimp, clams, flounder, halibut, cod, and sharks furnish the Eskimos with food and other necessities.

Checking Up, p. 388

1. Most Eskimo settlements are along the coast because the people depend on the sea for many things they need in their daily lives. Hunting and fishing are the two main occupations of the Eskimos.

2. The Eskimos who live in northern Canada build their winter houses from snow blocks. These houses are called igloos. Alaskan Eskimos build their winter houses of sod and stone. In southern Greenland, lumber is used; in northern

Greenland, winter houses are built of sod, driftwood, and stone. Almost everywhere the Eskimo's summer home is a portable tent.

3. √ A kayak is a light, skin-covered boat. It has only one opening, where the Eskimo sits. He ties the bottom of his parka around this opening, making the whole boat watertight. The kayak is swift and light, enabling the Eskimo to hunt animals on ice pans. If a wave upsets the boat, the paddler makes a quick twist that puts the boat upright. Because water cannot leak into the kayak, the Eskimo stays dry in his waterproof clothing.

4. Some mineral resources that have been developed in the North American treeless lands are gold, radium, silver, uranium, cryolite, and oil.

Checking Up, p. 390

1. The reindeer supplies the Lapp with milk and cheese for food; reindeer skin furnishes the Lapp with clothing and material for his tent; from its bones and horns, the Lapp makes tools. The reindeer pulls sleds, which are used for transporting the Lapp's tent and other belongings. Lapps are nomads because they must follow their reindeer herds to find pasture.

2. The Lapps need skis because they are the best form of transportation when snow covers the ground. The Lapps also need sleds to haul their tents and belongings on the frequent moves.

3. √ The Soviet government has improved transportation in its northern treeless lands and has developed many of the mineral deposits. The government has set up fishing stations along the coast, where motorboats have taken the place of sailboats Canning and refrigerating plants have been built to preserve the fish, and railroads and large ocean-going vessels carry the fish and fish products to market. New industry has also been started. These improvements have caused the population to increase greatly during the past fifty years.

Questions to Think About, p. 390

1. The Eskimos make their living by fishing, hunting, and trapping. The cold waters of the seas around the northern treeless lands are full of seafood and sea animals. Many animals also live on the land and furnish the Eskimo with fur, skin, and meat.

2. In building his home for the winter, the Eskimo must use whatever he can find in the district where he lives. In northern Canada, the winter home is built of snow blocks; in Alaska, it is built of sod or stones; in northern Greenland, it is built of driftwood, sod, or stones; and in southern Greenland it is built of lumber. The Lapp's summer home is a tent of reindeer skin or wool stretched over a framework of poles. A hole at the top of the tent allows the smoke of the campfire to escape. These tents are easy to take down and to pack when the Lapps move. In the winter, they build a more permanent house, which is partially underground and built of logs, sod, or earth. Since the women and children remain inside during the winter, these houses are more comfortable.

3. The Eskimos hunt, fish, and trap for a living while the Lapps follow their reindeer herds, which furnish them with a livelihood. The answer to the second part of the question is based on personal opinion. Be sure your students can give reasons to support their opinions.

4. Murmansk has grown rapidly because of the improvements in transportation and the fact that it has an ice-free harbor all year round. The city is the center for a great fishing fleet and has large refrigerating plants and a cannery. One of the Soviet's biggest shipyards is there. It is located at one end of the northern sea routeto Vladivostok and on the railroad line from Leningrad.

5. The airplane, icebreaker, tractor, and auto-sled have made the opening of the northern treeless landspossible.

6. Lemmings feed on grass roots, stalks, and lichens. The Arctic fox preys upon nesting birds. The Arctic hare blends with the landscape because it has a brown coat in the summer and a white coat in the winter. The caribou feeds on lichens, mosses, and shrubs and has an insulated skin, waterproof fur, and hoofs that act as snowshoes. Some birds migrate southward during the winter. Others stay all year round. The Ptarmigan's feathers change to blend with the surrounding landscape.

7. There are many fogs in treeless lands because warm air is frequently in contact with a cold surface, causing fog. In the summer, warm air from the heated land

drifts over the cold water. In the winter, the warmer air from over the water causes fog as it crosses the cold land. The fog may even be brought about by temperature differences created by a lake, a river, a town, or even a herd of caribou. Blizzards in the treeless lands are terrifying because there are no trees and few hills to break the full force of the wind and driving snow.

We and They, p. 390

These questions can be answered by your students as they compare daily living in their community with living routines in the northern treeless lands.

EVALUATION EXERCISES

To Measure Your Students' Understanding of New Vocabulary Words

Directions: Unscramble the following words. Define each unscrambled word.

karpa	(parka)	(The hooded coat of the Eskimo.)
hleicn	(lichen)	(A type of moss that grows in the northern treeless lands.)
yaakk	(kayak)	(A skin-covered boat used by the Eskimo.)
lapusk	(pulkas)	(A reindeer sled used by the Lapps.)
akMmnrsu	(Murmansk)	(The leading city in the treeless lands of the U.S.S.R.)

To See Whether Your Class Understands How Animals and Plants Adapt to This Climate

Directions: Each of the following plants or animals is adapted for life in the cold treeless lands. Match Column I with Column II. The answers in Column II can be used more than once.

✓

Column I	Column II
1. Arctic hare (a)	a. Changes color in the summer and again in the winter
2. Caribou (b)	b. Has insulated skin
3. Arctic tern (e)	c. Grows on rocks
4. Ptarmigan (a)	d. Sleeps during the long winter
5. Lichen (c)	e. Goes south in the winter

To Determine Whether Your Students Know How the Eskimos and Lapps Have Adjusted to Their Natural Environment

Directions: Complete each of the following statements by choosing the one answer which best completes the statement.

✓ 1. The chief occupation of the Eskimo is

(a) hunting,
(b) farming,
(c) reindeer herding,
(d) selling.

2. The Eskimos' summer houses are made of

(a) wood,
(b) snow blocks,
(c) skins
(d) bricks.

3. The Eskimos' chief food is

(a) meat,
(b) vegetables,
(c) fruit,
(d) eggs.

4. The chief occupation of the Lapps is

(a) hunting,
(b) farming,
(c) reindeer herding,
(d) selling.

5. The Lapps' summer homes are made of

(a) wood,
(b) snow blocks,
(c) skins,
(d) bricks.

6. The Lapps' chief food is

(a) reindeer meat,
(b) tea,
(c) manioc,
(d) eggs.

STUDENT READING LIST FOR CHAPTER 19

NONFICTION

*Nomads of the North, Jannes, E. (Macmillian, 1953). The life of the Lapp consists of more than just wandering and herding reindeer. This pictorial study shows these nomadic people at work and play in their homeland in northern Sweden.

***Here Is Alaska, Stefansson,E. (Scribner, 1943). The great Artic explorer shares a little of his knowledge of the Eskimo cultures in Alaska.

**Within the Circle, Stefansson, E. (Scribner, 1945). Greenland, Lapland, Alaska, the Canadian North, and Siberia are located within the Arctic Circle.

*Let's Read About Alaska, Tompkins, S. (Fideler, 1949). The Eskimo forms a very important part of the picture of Alaska.

FICTION

*Somi Builds a Church, Busoni, R. (Viking, 1943). It took five days of traveling to reach the forest in order to get logs, but Somi and his friends built their first church in Lapland.

**Icebound Summer, Carrighar, S. (Knopf, 1954). During summer's short stay, the frozen waste of the tundra blossoms with millions of flowers.

*Eskimo Hunter, Hayes, F. (Random House, 1945). Kapoongo had never seen a tree, a cow, a horse, a movie, or an auto, and he couldn't even swim.

***Pete of Ice Bay, Illingworth, F. (Coward-McCann, 1951). Nowhere on earth is danger and courage so much a part of daily life as among the Eskimos on Baffin Island.

**Seloe, The Story of a Fur Seal, John, B. (World, 1955). Seloe proves that fur is something more than material from which to make a coat.

**Kalak of the Ice, Kjelgaard, J. (Holiday, 1949). The polar bears' domain is north of the Arctic Circle. Here they raise their cubs and fear no one but man.

*Lars and the Luck Stone, Knoop, F. (Harcourt, 1950). When his father's reindeer herd disappears somewhere in Lapland, Lars is determined to solve the mystery all by himself.

**Northern Trail Adventure, Lathrop, W. (Random House, 1944). What was the mystery of Kop-a, traveling alone, without dog sled or adequate supplies, fearful of the mounted police and so eager to reach the coast of northern Canada?

*Boy with a Harpoon, Lipkind, W. (Harcourt, 1952). An Eskimo boy in northern Alaska wins his right to go whale hunting with the rest of the men of the village.

*Miss Pickerell Goes to the Arctic, MacGregor, E. (McGraw, 1954). Miss Pickerell goes on a search for a weather expedition lost in the frozen northland.

*Panuck, Eskimo Sled Dog, Machetanz, F. (Scribner, 1939). There was another man in the family when Andy was given his own lead dog to train.

*Barney Hits the Trail, Machetanz, S. (Scribner, 1950). Running a trading post and going to school with the Eskimos makes a winter in northern Alaska exciting.

***Etuk, The Eskimo Hunter, MacMillan, M. (Dodd, 1950). To hunt is to live! Etuk must not miss when he takes aim at a polar bear or his family might starve or be fatherless.

*Chukchi Hunter, Stall, D. (Morrow, 1946). Living on the eastern tip of Siberia, Ankat uses a newly obtained motorboat to prove he is old enough to hunt walrus.

**Snow King, Herd Dog of Lapland, Strong, C. (Dodd). Snow King aids in the desperate attempts to rescue downed American fliers in the frozen tundra of Lapland.

AUTOBIOGRAPHY

**Where Else But Alaska, Machetanz, S. (Scribner, 1954). The author's story of her trip to Alaska to get married and of the new way of life that she found there.

SELECTED AUDIO-VISUAL AIDS FOR CHAPTER 19

Angottee, Story of an Eskimo Boy, 1952 (mp, color, b&w, sound, 32 min, #49). The life story of an Eskimo boy from birth to maturity.

The Arctic, 1954 (fs, b&w, 65 fr, #44). Discusses the geographic exploration, natural resources, and strategic location of the area.

Arctic Seal Hunt, 1955 (mp, color, b&w, sound, 12 min, #9). Eskimos are shown hunting walrus, polar bear, and seal. They process the skins for clothing and use the meat for food.

Canadian Eskimo (fs, b&w, 39 fr, #49). A year with the Eskimos, showing winter and summer occupations.

Dwellers in Cold Countries, 1939 (mp, b&w, sound, 9 min, #22). The climate of the Arctic and Antarctic affects home construction, clothing styles, and types of food.

Eskimo Sea Hunters (Northwestern Alaska), 1949 (mp, b&w, sound, 20 min., #65) and 1955 (fs, b&w, 46 fr). An Eskimo family in northern Alaska illustrates how people live in regions where the weather is always cold.

How a Hunting People Live, 1938 (mp, b&w, sound, 11 min, #42). The people on the tundras of Siberia depend upon animals for their existence.

Land of the Long Day, 1952 (mp, color, b&w, sound, 38 min, #49). Describes the life of the Eskimos on Baffin Island during the Arctic summer.

Lands of Few People (Canada and the Far North), 1953 (fs, b&w, 51 fr. #58). A description of the Far North, including Eskimos, Indians, mines and forests.

Laplanders, 1952 (mp, b&w, sound, 11 min, #23). Grazing reindeer north of the Arctic Circle is part of the daily life of the Laplander.

Nomad of the North, 1952 (mp, b&w, sound, 18 min, #31). Shows the life of the Sea Lapps and the Lapps of the reindeer culture in the land of the midnight sun.

Nomads of the North, 1955 (mp, color, b&w, sound, 12 min, #9). The story of reindeer herding on the tundra of northern Alaska.

Siberia, 1937 (mp, b&w, silent, 30 min, #23). Sections of this film deal with the life of the Tungus on the Siberian tundra.

Story of the Polar Regions, 1938 (mp, b&w, sound, 30 min, #42). Traces the exploration of the north and south polar regions and discusses the Eskimos and wild life.

FEATURE: A LAND OF ETERNAL ICE AND SNOW (pp. 391-93)

In the southern hemisphere, there are no evergreen forestlands or treeless lands. The large continent of Antarctica lies almost entirely within the Antarctic Circle and is perpetually covered with ice and snow.

On this continent there is little life of any kind. Some moss and lichens grow, and a few penguins live along the shore, but the interior of the continent is uninhabited. In this feature, your students will read how high mountains and raging blizzards hindered exploration for many years. In fact, the vast majority of the continent is still unexplored.

Some minerals have been discovered, and there is evidence that many more are present. The United States has sent many exploring and mapping expeditions into the Antarctic to determine the value of the land. Some people feel that the future will bring many changes to the continent of Antarctica.

FOR YOUR OWN READING:

You may want to refer to the following books for more information about Antarctica.

Henry, Thomas R., The White Continent.
Marret, Mario, Seven Men Among the Penguins.

MAJOR QUESTION

The "Major Question" pertaining to this feature relates to the "Primary Objective" of acquainting your students with the earth on which they live. You may want to base your lessons around the "Major Question."

Primary Objective:
To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

→

Major Question:
Why is the world interested in the frozen continent of Antarctica?

Drawbacks	Advantages
1. Rugged topography	1. Presence of some minerals
2. Cold climate	2. Signs of other valuable minerals
3. Glaciers and ice cap	3. Possibility of use as a giant storage area for surplus foods
4. Pack ice	

SUGGESTIONS FOR TEACHING

Much of the unexplored land of the world is on the continent of Antarctica. The United States has taken an interest in the area and recently completed an exploring operation called "Operation Deepfreeze." We are greatly interested in the findings of scientists from many countries of the world who spent the Geo-Physical Year on the mainland of Antarctica, exploring and mapping the area and making scientific observations. There are many current events in connection with these expeditions which your students can collect and use in class.

Your class might also like to know some additional facts about the expeditions which first reached the South Pole (p. 392.) The story is both thrilling and tragic.

For several years, the Arctic explorer Roald Amundsen had been preparing an expedition to try to reach the North Pole. When Robert Peary reached the North Pole in 1909, Amundsen thought his trip would be in vain. When his expedition was in mid-Atlantic, he decided to turn south and head for the South Pole instead.

An English explorer, Robert Scott, was already in Antarctica preparing to reach the South Pole with Siberian ponies and trucks. Scott had spent many years getting ready for the trip.

When the Amundsen expedition arrived on the scene, a race developed to see which expedition would be the first to stand on the South Pole. Amundsen, who had done most of his exploration in the Arctic, put his trust in dog sleds and Eskimo techniques. Both expeditions had to wait for the summer months before making their attempts. Much time was needed to stock the advance bases with supplies and food to be used in the final assault.

The diaries of both men contain accounts of the hardships encountered on the trip over the mountains and across the crevassed ice of the plateau. Amundsen and four companions, using dog sleds, decided they had reached the site of the South Pole on December 15, 1911 and confirmed their "dead reckoning" by making observations of the sun. They did not want to waste much time at the pole since they were anxious to get back to their base camp before the fall and winter blizzards started. The group pitched a small tent which had been made by the sailmaker with the expedition. The sailmaker apparently had been confident of the success of the expedition because written inside the tent was, "Good Luck. Welcome to 90°." After pitching the tent, Amundsen wrote a letter to the King of Norway and to Scott, left some supplies in the tent, and started for his base camp.

Over a month later, on January 17, 1912, the members of the Scott party knew that they were nearing the pole and thought that they were the first on the spot. But as they came over a rise in the ice, they saw a tent, with the Norwegian flag flying over the door, sitting right on the South Pole.

The Scott expedition had experienced difficulty with their trucks and ponies, neither of which were efficient in the Antarctic cold. Much of the journey had been made with the men pulling the sleds. The return journey had a tragic ending. Because of the cold, much of the fuel which Scott had stored in the outpost had leaked through the metal containers. The men found themselves without heat. They grew weaker and weaker and one by one they died. A later expedition found their bodies and recovered the observations which Scott had painstakingly kept up to the time of his death.

Your students might also be interested in finding out about more recent explorations in the Antarctic. Some of your students might prepare reports about Little America, Admiral Byrd, Lincoln Ellsworth, Operation Deepfreeze, and the Geo-Physical Year.

The last paragraph on p. 393 points out some of the value of this region. You might use this paragraph as a basis for discussing the possibility of the world's future use of Antarctic lands.

SUGGESTED ANSWERS FOR FEATURE (pp. 391-93)

Checking Up, p. 393

1. Antarctica is primarily plateau land surrounded by high mountains and lies buried under a huge cap of snow and ice several thousand feet thick. It is the highest continent in the world, and the name "White Continent of the Sky" is very appropriate.

2. The Ross Shelf is a sheet of ice that extends over the waters of the Ross Sea. It is over 150,000 miles square and in some places 300 or more feet thick. Antarctic icebergs are different from the icebergs of the Arctic because they have flat tops and sometimes are almost 100 miles long.

3. The high ice-covered mountains and the raging blizzards kept early explorers from reaching the South Pole.

4. It may become profitable to send miners and equipment to Antarctica in the future. Outcrops of coal have been discovered in Antarctica, and there are signs that other valuable minerals are present.

STUDENT READING LIST FOR FEATURE (pp. 391-93)

NONFICTION

**The Conquest of the North and South Poles, Owen, R., (Random House, 1952.) The thrilling story of Peary and Byrd and their attempts to reach the poles at opposite ends of the globe.

FICTION

**South Pole Husky, Strong, C., (Longmans, 1950). Because of his knowledge of Greenland Huskies, Nils Paulson gets to go with Amundsen on his race for the South Pole.

SELECTED AUDIO-VISUAL AIDS FOR FEATURE (pp. 391-93)

Expedition to Antarctica, 1948 (mp, b&w, sound, 20 min, #60). Based on Admiral Byrd's expedition to Little America. Presents highlights of preparation, activities, and achievements.

Life in the Antarctic, 1938 (mp, b&w, sound, 11 min, #42). Winter and summer on the great Antarctic Continent where no man lives and few animals make their home.

Story of the Polar Regions, 1938 (mp, b&w, sound, 30 min, #42). Traces the exploration of the north and south polar regions and describes the Eskimos and wild life.

REVIEWING UNIT NINE

PLANNING THE REVIEW

"Reviewing Unit Nine"on pp. 393-94 contains several exercises which you may want to include in your unit review. You may also want to review the "Major Questions" suggested for the chapters and feature. By reading "A Broader View" on pp. 393-94, your students will have an opportunity to re-examine the reasons why more and more people are going to live and work in the lands around the poles.

ADDING UP IDEAS

As your class recalls information about the lands around the poles, they might include some of the following items.

1. In the vast northern forestlands (taiga) the people have adapted their ways of living to the long, cold winters and the short, cool summers in the following ways:

a. Building houses of wood or logs with thick walls and double windows.

b. Getting much of their food by hunting large game animals; by fishing in winter through holes cut in the ice; and by gathering wild berries.

c. Raising some root crops and a few other crops, such as oats and barley, which mature in the short and uncertain growing season.

d. Trapping fur-bearing animals, selling some of the furs, and making warm clothing for themselves from furs.

e. Logging and lumbering.

f. Manufacturing some wood products but selling most of the logs for lumber or wood pulp.

g. Mining in some areas.

h. Traveling and transporting goods in winter by using skis, snowshoes, airplanes, and cat trains because the ground and water bodies are frozen.

2. In the northern treeless lands (tundra), the few people who live there have adapted their ways of living to nine months of winter, two months of cool summer, and about two weeks each of spring and autum; to a long period of low sun in summer and no sun in winter; to a year in which no month has an average temperature above 50° and in which a frost may be expected at any time.

Suggested Answers for "Questions to Think About," p. 394

1. This question relates to your local community. Have your students compare their home climate to the climate of the northland.

2. The people of northern lands build houses of wood and logs with thick walls because logs are plentiful and the thick walls keep out the cold. The people make use of the food resources which they find near at hand. Because few crops will grow and it is hard to transport food into the area, they get much of their food by hunting large animals, by fishing in winter through holes cut in the ice, and by gathering birds' eggs and wild berries. They carry on a great deal of logging and lumbering because forests are the most plentiful resource. During the summer, they travel on the waterways and in airplanes equipped with pontoons because the land is frequently swampy and because there are many rivers and lakes.

3. The armed services have sent thousands of men into the far northlands to man air bases, radar stations, and weather stations which are helping to defend our country.

4. The severe winter climate of the northern lands is helpful to the people who live in the Far North because travel is easier on frozen land and waterways. The freezing temperatures make food preservation very easy. Because of the cold climate, the animals have thick valuable furs.

WORKSHOP ACTIVITIES

Some suggestions for projects are listed in "Your Geography Workshop" on p. 394 of the textbook. In addition, you may want to suggest one of the following projects.

1. Make models of an airplane, cat train, canoe, skis, dog sled, pulka, igloo, log house, or other houses typical of northlands. Add your model to the class museum.

2. Draw pictures or posters showing ways of life in the northern forestlands and the northern treeless lands.

3. Write special reports about the Yukon Gold Strike, Peary's trip to the North Pole, weather stations in the northland, Alcan Highway, Labrador iron mines, animals of the northland, or life of the bush pilots.

4. Construct a diorama showing scenes of Eskimo life, Lapp life, Indian trappers, logging, mining, fishing, sawmill, etc.

5. Collect current events and pictures about important happenings in the northland or about the Geo-Physical Year. Mount them for display on the bulletin board.

EVALUATING THE UNIT

In your unit evaluation, you may want to construct test items based on the reading material, map studies, class discussions, project work, and special reports. You may also wish to select some of the 'Checking Up" questions in the text, the "Major Questions" pertaining to the chapters and feature, or the "Evaluation Exercises" in this booklet.

See also Unit Test Nine in the booklet of Teaching Tests for use with The World Around Us, referred to on p. 12 of Booklet #1.

REVIEW AND REFERENCE SECTION
REVIEWING THE WORLD'S CONTINENTS AND COUNTRIES

BOOKLET #12

Your Own Look Ahead 1
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Reviewing World Cities and Trade. . .22

YOUR OWN LOOK AHEAD

In each unit of The World Around Us, your students have had an opportunity to examine different parts of the world and to see how climate and other phases of the natural environment affect people's lives. You may now want to spend several weeks reviewing and summarizing the most important geographic facts, concepts, and relationships taught in the various units of The World Around Us.

A review is usually most effective when the material which has been studied is presented in a new way. Thus, the "Review and Reference Section" on pp. 395-480 of The World Around Us guides your students in taking another, somewhat different, look at the world. In this review section, the geography of the world is organized for study by continents and countries.

In this section, short comprehensive passages about each continent and the countries on each continent summarize the important concepts which were studied earlier in the textbook. Many maps and tables furnish additional information about each country.

The "Review and Reference Section" is divided into a number of parts which will help your students make effective use of their textbook during the review. The various parts are listed below. A table of contents also appears on p. 395 of the textbook.

I. Reviewing the World's Continents and Countries, pp. 396-413, 449-55

A. Introduction, p. 396, offers two suggestions which your class might follow in its review.

B. "North America," pp. 397-403, presents a new glimpse at the countries of North America as well as the Caribbean Islands.

C. "South America," pp. 403-06, summarizes the important geographic relationships evident in the countries of South America.

D. "Europe," pp. 406-13, reviews the many countries of Europe, including all of the U.S.S.R.

E. "Asia," p. 413 and continued on pp. 449-52, presents the countries of Asia and the islands of the East Indies.

F. "Africa," pp. 452-54, reviews important information about the political divisions of Africa.

G. "Australia and Oceania," pp. 454-55, focuses attention on Australia, New Zealand, and the islands of the Pacific.

II. World Maps and World Climates, pp. 414-48, contains several world maps (rainfall, population, elevation, climate), pairs of continent maps showing political and climatic divisions, and tables containing facts about all of the major countries on each continent.

III. Reviewing World Cities and Trade, pp. 456-60, re-emphasizes the importance of cities and examines the pattern of world trade. The section includes a world map showing trade routes, industrial areas, and principal cities, as well as a list of the "Great Cities of the World" and their populations.

V. Glossary of Words to Understand, pp. 461-64, contains definitions and pronunciations (where necessary) of the important or unusual geographic words taught in the textbook.

IV. Index, pp. 465-80, includes pronunciation of place names and classified references to the countries and continents of the world. Page references to maps and pictures are given special treatment.

A GLANCE BACK AT THE "PRIMARY OBJECTIVES"

In their study of world geography, your students have learned many facts, skills, ideas, attidudes, and appreciations that lead ultimately to the six "Primary Objectives" presented in Booklet 1. Worthwhile evaluation can be made by checking how well your students have accomplished these objectives. The review gives you an opportunity to evaluate, observe, and re-teach, if necessary, any important information and skills in which your students are weak.

The following chart summarizes the six "Primary Objectives" and the related "Major Questions" suggested previously for the chapters and features of The World Around Us.

PRIMARY OBJECTIVE: To acquaint students with the earth on which they live, the kinds of people who live on the earth, and the ways in which these people live.

MAJOR QUESTIONS

This Living Earth, Question #1:
How do people depend upon the earth?

This Living Earth, Question #2:
What is climate?

Feature (pp. 121-23), Question #1:
Why do the Australian grasslands produce so little?

Feature (pp. 155-57), Question #1:
In the Australian dry lands, why are the sheep and cattle stations so large and scattered?

Feature (pp. 190-93), Question #1:
In what ways is the sunny semitropical section of Chile the most prosperous part of the country?

Feature (pp. 193-95), Question #1:
What types of people live and work in the sunny semitropical region of Africa?

Feature (pp. 195-97), Question #1:
How is southern Australia able to produce the continent's wheat supply?

Feature (pp. 233-35), Question #1:
What types of activities enable the people to make a living in the moist semitropical lands of South America?

Feature (pp. 236-37), Question #1:
What groups of people live in the moist semitropical lands of Africa and what products do they produce?

MAJOR QUESTIONS

Feature (pp. 237-39), Question #1:
Why are the leading cities of Australia located in the moist semitropical region?

Chapter 13, Question #1
Why are there many different occupations in marine Europe?

Feature (pp. 271-74), Question #1:
Why do more people live in northern marine Chile than in the other two sections?

Feature (pp. 274-77), Question #1:
What activities are favored by the marine climate of New Zealand?

Chapter 15, Question #1:
How does the Soviet Union control agriculture and industry behind the "Iron Curtain"?

Chapter 15, Question #2:
Why is Sweden's moist continental area called the "Heartland of Sweden"?

Feature (pp. 320-23), Question #1:
How do the people live in the moist continental sections of Communistic eastern Asia?

Chapter 17, Question #1:
How does the Soviet Union depend on its middle latitude dry lands?

Feature (pp. 391-93), Question #1:
Why is the world interested in the frozen continent of Antarctica?

PRIMARY OBJECTIVE: To acquaint students with their own country so that they will have a better knowledge and understanding of its position in the world today.

MAJOR QUESTION

Chapter 9, Question #2:
In what ways are the people of California attempting to solve their problems?

MAJOR QUESTION

Chapter 14, Question #1:
What types of agriculture are practiced in the moist continental section of North America?

(Several of the "Major Questions" related to other "Primary Objectives" also are aimed at increasing knowledge and understanding of the United States.)

PRIMARY OBJECTIVE: To show the interrelationship between man and his natural environment and how man has learned to change, control, and direct his environment.

MAJOR QUESTIONS

This Living Earth, Question #3:
How is man learning to control some aspects of a changing environment?

Chapter 1, Question #1:
How has man's way of living in the American rainforest been controlled by the natural environment?

Chapter 2, Question #1:
In what ways do the people of the African rainforest live similarly to the people in Amazonia?

Chapter 2, Question #2:
How have changes in environment brought about changes in the way people live?

Chapter 3, Question #1:
In what ways have the people of the Asiatic rainforest learned to change and control many things in their environment?

Chapter 4, Question #1:
How have the people of the African grasslands adapted their lives to heat and to alternating wet and dry seasons?

Chapter 5, Question #1:
Why are the monsoons so important to India's prosperity?

Chapter 6, Question #1:
In what ways do the Bedouins live in harmony with their natural environment?

Feature (pp. 153-154), Question #1:
What changes have come to the Kalahari Desert in recent years? . Why have these changes had little influence upon the region?

Chapter 8, Question #1:
How has the Mediterranean farmer been able to work successfully with his natural environment?

MAJOR QUESTIONS

Chapter 9, Question #1:
How have the people of California taken advantage of their natural environment?

Chapter 11, Question #2:
How do Chinese farmers make wise use of their land?

Chapter 12, Question #1:
How are work activities in the Pacific Northwest related to the natural environment?

Chapter 16, Question #1:
How does the natural environment control man's activities in the middle latitude dry lands of the United States?

Chapter 17, Question #2:
How have the people on the dry lands of Central Asia adapted to a difficult environment?

Feature (pp. 360-61), Question #1:
How has natural environment limited activities in southern Argentina?

Chapter 18, Question #2:
How have new inventions and equipment helped to develop the northern forestlands?

Chapter 19, Question #1:
How have people in the northern treeless lands adapted to their natural environment?

Chapter 19, Question #2:
Why has there been a growth of population in the treeless lands of the Soviet Union?

PRIMARY OBJECTIVE: To promote peace by emphasizing the interdependence of all peoples in the world and the problems of these peoples.

MAJOR QUESTIONS

Chapter 1, Question #2:
For what things do we depend upon the American rainforest?

Chapter 3, Question #2:
In what ways does the world depend on the Asiatic rainforest? How are the people of the rainforest dependent on the rest of the world?

Chapter 5, Question #2:
How do the people of India depend on the people of southeast Asia?

MAJOR QUESTIONS

Feature (pp. 115-21), Question #1:
What products does the world get from the American grasslands?

Chapter 7, Question #2:
In what ways has mining in the Atacama Desert been dependent upon the rest of the world?

Chapter 10, Question #1:
What products of our Southland are needed by the people of the United States and the rest of the world?

(Continued on next page)

MAJOR QUESTIONS

Chapter 11, Question #1:
What factors have influenced the growth of industry in Japan? Why is industry dependent on other countries of the world?

Chapter 13, Question #2:
What are the important ports of marine Europe and what products are exchanged with the rest of the world?

MAJOR QUESTIONS

Chapter 14, Question #2:
Why is the moist continental section of the United States the world's leading industrial region?

Chapter 18, Question #1:
How does the world depend on its northern forestlands?

PRIMARY OBJECTIVE: To teach the value of natural resources and the need for making better use of them through conservation.

MAJOR QUESTIONS

Chapter 4, Question #2:
In what ways have living patterns been changed in some areas because mineral resources are present?

Chapter 6, Question #2:
Why is the Nile River so important to Egypt?

Chapter 7, Question #1:
How has the conservation of water been used to make the deserts of the United States productive?

MAJOR QUESTIONS

Chapter 10, Question #2:
In what ways are Southern farmers learning to conserve the soil?

Chapter 12, Question #2:
How is conservation being practiced in the lumbering and salmon industries?

PRIMARY OBJECTIVE: To develop a real interest in worthwhile leisure activities, such as travel, reading, lectures, museum visits, and observations that will result in a better understanding of the land of the world, the peoples of the world, and their occupations.

MAJOR QUESTION

Chapter 8, Question #2:
Why does the Mediterranean area attract many tourists each year?

MAJOR QUESTION

Chapter 16, Question #2:
Why are some sections of the middle latitude dry lands of the United States popular tourist attractions?

REVIEWING WITH A PURPOSE

During the past year, your class has studied many different segments of the world and has seen many geographic relationships. The review gives your students an opportunity to piece together the various segments and to see the world as a whole, all its parts functioning as a unit. By piecing together the various climatic regions, your students can see the complete global pattern created by climate. They can see how the world's climatic regions are related to one another; they can examine each country and determine the relationships between its various climatic regions; and they can review how life has been influenced by the natural environment in each of these climatic regions.

The review enables you to summarize information learned through "Major Questions" and to evaluate achievement of the "Primary Objectives." In addition, your class will have a chance to practice many of the skills they have been developing throughout the year. Your review can also reinforce the broad understandings developed through geography and bring out new and important viewpoints. Misconceptions can be cleared up, facts learned can be verified, and knowledge can be applied.

Many schools have final examinations on the year's work in geography. If your school is one of these, this review will help you to prepare your students for their examination.

PLANNING THE REVIEW

Committee Work. When reviewing a great deal of material, many teachers find it helpful to divide the class into a number of committees. Each committee is responsible for a portion of the work, and each reports its findings to the rest of the class.

A review based on committee work, if planned carefully, can be highly successful. If you want to conduct your review in this manner, you will find it helpful to read the section on "Reviewing the World's Continents and Countries," beginning on p. 396 in *The World Around Us*. This material falls quite naturally into five divisions which make good committee topics. Each committee can be responsible for one of the continents of the world; each member of a committee can be assigned a country or countries located on the continent. The various assignments might look like this.

Committee I

North America, pp. 397-403

1 student: chairman
2 students: United States, pp. 397-401
1 student: Canada, pp. 401-02
1 student: Alaska and Greenland, p. 402
1 student: Mexico, Central America, and Caribbean Islands, pp. 402-03

Committee II

South America, pp. 403-06

1 student: Chairman
1 student: Brazil, pp. 403-04
1 student: Peru, p. 404
1 student: Chile, pp. 404-05
1 student: Argentina and Uruguay, pp. 405-06
1 student: other countries, p. 406

Committee III

Europe, pp. 406-12

1 student: chairman
1 student: countries of southern Europe, pp. 406-07
1 student: countries of western Europe, pp. 407-09
1 student: countries of central Europe, pp. 409-10
1 student: countries of northern Europe, pp. 410-12
1 student: The Soviet Union, pp. 412-13

(The various sections of Europe can be divided into the individual countries if there are more members on the committee.)

Committee IV

Asia, pp. 412, 449-52

1 student: chairman
1 student: countries of western Asia, p. 413 and p. 449
2 students: the Indian Peninsula, pp. 449-50
1 student: southeast Asia, pp. 450-51
2 students: eastern Asia, pp. 451-52

Committee V

Africa, pp. 452-54; Australia and Oceania, pp. 454-55

1 student: chairman
1 student: countries of northern Africa, pp. 452-53
1 student: countries of central Africa, p. 453
1 student: countries of southern Africa, p. 454
1 student: Australia, pp. 454-55
1 student: New Zealand and other islands, p. 455

In some types of committee work, you can allow your students to choose the topics as well as the committee on which they wish to work. In the type of review suggested here, however, it is important to have all of the countries of the world discussed, and you may find it advisable to assign your students to the various committees. However, each committee should be allowed to choose its own chairman and the members should be allowed to divide the work as they see fit. The students who are chosen as chairmen of the various committees should not be assigned specific countries on which to report. Their job is to organize the work of their committee, to prepare a report about the continent as a whole, and to introduce and summarize the committee's report.

Group Assignments. Your committees will work most effectively if you are precise about the type of information that you want them to include in their reports.

The section entitled "Giving Class Reports," on p. 396 in the textbook, may serve as a helpful guide. The group assignment should be planned in detail so that each student will know what is expected of him and what type of material should appear in his report. The assignment can be mimeographed and a copy of the assignment sheet might be given to every member of your class. The following suggested group assignment can serve as an example.

Committee's Responsibilities

1. To select a committee chairman.
2. To assign individual countries or sections of continents to each committee member except the chairman.
3. To summarize for the rest of the class the important geographic facts about each continent. This summary can be in the form of an oral report, mock radio broadcast or telecast, or a dramatization. Charts, graphs, maps, and pictures may be used to make reports clearer. The committee program should not extend over one-half hour. This allows time for questioning, discussion, and a "check up" to see how well the class understands the report.
4. To work quietly and in an orderly way so as not to disturb other groups.
5. To secure permission before visiting the school library or leaving the room.
6. To ask your teacher for help when it is needed.

Chairman's Responsibilities

1. To work democratically with the committee.
2. To know the important material in each of the committee member's reports.
3. To prepare an introduction to your committee's report, including:
    a. the name of the continent
    b. the location of the continent
    c. the climatic regions found on the continent
    d. the countries located on the continent.
4. To introduce the individual members of the committee before they give their reports.
5. To prepare a summary of your group's report covering the most important aspects of the individual country reports.
6. To supervise the questioning and discussion period following your committee's report.
7. To collect your committee's questions which are to be used to "check up" on the class's understanding of your committee's report.

Member's Responsibilities

1. To co-operate with the chairman and other members of your committee.
2. To read about your country or section of a continent in the "Review and Reference Section" of your textbook.
3. To look up your country or countries in the index, turn to the pages listed, and review what you have already studied about your country.
4. To add to your report other information from newspapers, magazines, other books, movies, or television.
5. To refer to the tables and maps on pp. 414-48 for information which you can use in your report and for source material for constructing maps, graphs, and charts.
6. To prepare a written report in the form of a booklet about your country or countries. A guide sheet will be furnished to help you decide what to include in your booklet. However, all booklets should include the following information about your country (or section):
    a. Name of the country
    b. Location of the country
    c. Climatic regions found in the country
    d. Characteristics of each climatic region within the country
    e. Various physical features
    f. Comparison among the climatic regions:
        population
        area
        cities
        crops
        natural resources
        industries
        transportation
        other activities
    g. Relationships between your country and the rest of the world:
        What does country export? to whom?
        What does country import? from whom?
    h. Other interesting things about your country:
        tourist attractions
        unusual features
        customs
        government
        religions
        people
7. To summarize the written report about your country as part of your committee's report to the class.
8. To suggest some of the important facts about your country which your chairman can use in his introduction and summary.
9. To prepare several "check up" questions to ask the class about some of the important facts in your report.

Evaluation Guide Sheet for Booklets. To help your students plan their booklets (see point 6 above), you may want to prepare an evaluation guide sheet similar to the one shown below. Each student should get a copy of this evaluation sheet so that he will know what to include in his booklet and how to proceed with greater confidence. Upon completing his booklet, each student can evaluate his own work by marking the boxes which best describe the various aspects of his work. You will need to stress that the "Excellent" column on the evaluation sheet represents a maximum effort. Students are not expected to have every item on the check sheet marked in this column; in many cases, this is neither necessary nor desirable. You can explain that the final grade will be based on an average of the entire sheet and on your own and perhaps another student's evaluation of the booklet.

Evaluation Guide Sheet

	Excellent	Good	Fair	Poor	Failing
COVER					
1. Binding	Neat, tight, metal	Tight, metal	Tight	Loose	None
2. Material	Stiff, clean, neat	Stiff, clean	Average	Flimsy	None
3. Title	Clever and original	Clever	Plain	No meaning	None
4. Name and class	Neat, in ink	Neat	Average	Sloppy	None
5. Art work: printing, writing	Original, neat, color	Neat, good	Little meaning	No meaning	None
INSIDE					
1. Table of contents	Complete with page nos., list of maps, graphs, etc.	Titles, Page nos.	Titles	Little information	None
2. Graphs & Charts (quality)	Original, neat, clear, meaningful	Original, neat, meaningful	Original, meaningful	Copied	None
(quantity)	4	3	2	1	0
3. Maps (quality)	Neat, color, clear, meaningful, accurate	Neat, meaningful, accurate	Neat, meaningful	Sloppy, no meaning	None
(quantity)	4	3	2	1	0
4. Drawings (quality)	Neat, color, original, meaningful	Neat, color, meaningful	Neat, meaningful	Sloppy, little meaning	None
(quantity)	4	3	2	1	0
5. Pictures (quality)	Cut out neatly, glued, labeled, meaningful	Cut out neatly, labeled, meaningful	Cut out neatly, meaningful	Cut out poorly, little meaning	None
(quantity)	4	3	2	1	0
6. Appearance	Arranged well, neat, in ink	Arranged well, ink	Average, ink	Sloppy, ink	No ink
CONTENT					
1. Clearness	Paragraphs very clear, easy reading	Paragraphs clear	Difficult to understand in parts	Difficult to understand	Can't understand
2. Grammar & punctuation	0 mistakes per page	1 mistake per page	3 mistakes per page	5 mistakes per page	More than 5 mistakes per page
3. Originality	Writer's own words	Mostly in writer's own words	Sounds copied	Copied from book with few changes	Copied from book
4. Completeness	Covers all the topics	Covers most topics	Covers some topics	Covers few topics	Covers none of the topics
5. Length	1,000 words	700 words	500 words	300 words	Under 300 words
6. References	Many used and listed	Several used and listed	A few used and listed	Some used, not listed	None used

An evaluation check sheet, such as the one above, provides an objective means for grading booklets. Some teachers make use of the student's personal check sheet which is handed in with the booklet. The student's sheet is averaged with other check sheets filled out by the teacher and another student who is assigned to read and evaluate the booklet. If you would like to use a check sheet during this review, you will need to construct and mimeograph the sheet well in advance of the planned review and committee work.

This type of booklet activity emphasizes many desirable skills in the use of graphs and maps, in composition, punctuation, grammar, originality, and geographic knowledge. Most students enjoy making booklets even though they agree it involves a great deal of work. The booklets are usually projects of which the students can be proud and which they will want to keep.

Assembling Materials. Your committees will need many materials as they work on their individual topics. The materials are of two different types. First, the committees will need to collect geography books, reference books, dictionaries, atlases, almanacs, pertinent magazines, and newspapers. The materials which apply to each committee can be given to the committee chairman.

Second, the committees will need to assemble art materials, such as scissors, glue, colored pencils, outline maps, construction paper, tracing paper, and erasers. You may find it necessary to have your students furnish some of this material. If this is the case, your class should be told in advance to have all the necessary materials at hand when the committees start to work.

Much unnecessary moving around can be eliminated if each committee has an ample supply of source material. Careful planning and assembling of the necessary materials will help the committees to work effectively. Many of your students will do an excellent job in the committees. They will enjoy working closely with their fellow students in producing something of value to the whole class. Group work such as this also helps your students to develop skills which they will find useful in any type of committee project.

Interesting Your Class in the Review

1. Many classes indicate the various climatic regions of the world on a large outline map. As each region is studied, it is filled in on the map in a special color identified in the legend. (Colored pencils, rather than crayons, should be used. Crayons make too broad a line and also tend to cover up lettering.) If your class has been keeping such a progressive map, you might use the map to create interest in your review. After the completion of Unit Nine, most of the land area on the world map will be colored. The remainder will consist of varied mountain climate. You might explain to your class that mountainous areas can have several types of climate, depending on the elevation of the area and its location. Your class might want to spend some time discussing some of the countries which have large areas with this type of climate. Switzerland is the best example.

After the map has been completed, you can ask the class to examine the map to see how many countries of the world have more than one climatic region within their boundaries. As they examine the map country by country, they will see that the majority of the countries of the world have more than one climatic region. "How does this affect the country?" "What are the differences between these regions within the country?" "In which region do the people of the country prefer to live?" "Which region of the country is most productive?" Questions such as these may come up in the class discussion.

Your class will probably have difficulty remembering much of the material necessary to answer these questions. They will see the necessity for a review. At this time, you can announce that you are going to divide the class into a number of committes. Each committee is to be responsible for one of the world's continents. Your students can then be assigned to their respective committees and given work instructions and assignment sheets. Your groups may want to use the remainder of the class period as a planning session. At this time, they can elect their chairman and assign the various countries to members of the committee.

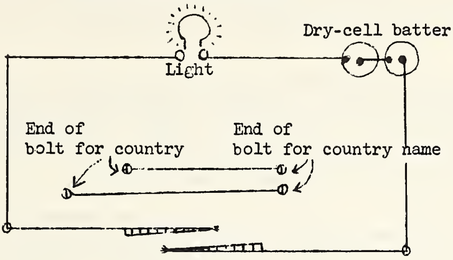
2. A device which always creates a great deal of interest is an electric map. An electric map of the world can be used as follows. One student places a pointer to the name of a country included in a list at one side of the map. Another student takes another pointer and locates the country. If he locates the country correctly, a bulb at the top of the map will light or a buzzer will sound. Students enjoy experimenting with this type of map.

Actually, the map is not difficult to construct. It is well worth the time, effort, and expense (about $2.00) involved. Students enjoy doing the wiring and construction work. Most of the materials can be bought inexpensively at a hardware store. The necessary materials include:

bell wire
doorbell buzzer or light socket (like those on a strand of Christmas tree lights)
brass screws
brass nuts and bolts
several dry-cell batteries
large outline map of the world (approximately 3'x4')
large piece of heavy cardboard or plywood (same measurement as the map)

Mount the large outline map of the world on the piece of cardboard or plywood. Then, using nails or screws, secure the light socket or doorbell buzzer at the top of the map. Punch or drill two holes (big enough for the passage of the bell wire) under the buzzer or light socket. Connect one end of a piece of bell wire to one of the terminals on the light socket or buzzer. Push the other end of the wire through one of the holes to the back of the cardboard or plywood. Attach this wire to one of the terminals of the dry-cell battery. If more than one dry-cell battery is used, the batteries should be joined by a short piece of wire connecting the center terminal on the top of one battery to the outside terminal on the top of the other.

Back of Electric Map



Connect one end of another piece of bell wire to the other terminal of the light socket or buzzer at the top of the map. Push the other end through the second hole near the top and bring the wire down along the back of the cardboard or plywood. Punch or drill another hole at the bottom of the map and bring the wire out to the front through this hole. This wire will become one of the pointers. To make the pointer, strip enough insulation from the end of the wire so that a good contact can be made. So that the pointer can be handled easily, tape the stripped end to a pencil. The pointer-wire should be long enough to reach any part of the map.

To provide the second pointer, connect a piece of wire to the unused terminal of the dry-cell battery and pull the wire through a second hole, punched at the bottom of the map. As before, make the pointer by stripping the insulation from the end of the wire and tape the wire to a pencil.

Prepare a list of the countries which you want to include on your electric map and glue this list to one side of the outline map. Punch or drill a hole beside each name and insert a small brass bolt in each hole. Then, on the map itself, drill a hole and insert a small brass bolt in each country included on the list. The two bolts for each country can be connected electrically by a piece of wire strung across the back of the map. The wire will be held in place securely when the nuts are screwed onto the bolts. You can include as many countries as you wish, but be sure to have two connected bolts for each. If you wish, you can add more countries later on.

When the exposed wire end of one pointer touches the brass bolt beside a country's name in the list, and when the other pointer-wire touches the brass bolt located in the country on the map, the circuit is completed, and the bulb will light or the buzzer will sound.

Students never seem to tire of experimenting with this map. Many who have shown little or no interest before want to spend their spare time locating countries of the world.

SUGGESTIONS FOR YOUR COMMITTEES

As the committees work, try to assist the various groups. By acting as a group member yourself, you will be able to observe how well your students are working, offer suggestions to improve their work, and furnish new ideas for their reports. The material below contains some ideas which your committees may find helpful. You might also suggest other things which have been presented before and which you have found effective.

Using the "Review and Reference Section". You may want to show each committee how the textbook can aid them in their review. On p. 395 of the textbook, there is a special table of contents for the "Review and Reference Section." Further, the review material for each continent contains a small table of contents, which appears underneath the title. For example, the listing for "North America" on p. 397 gives page references for the climate map of North America, the political map of North America, and a table of facts about North America.

You might also mention that the summaries of continents and countries in "Reviewing the World's Continents and Countries" are good examples to follow for reports. However, students should expand and illustrate the type of material that is presented in the textbook. For instance, in discussing China on p. 452, reference is made to the table of facts on p. 437. The text uses the information contained in this table in its discussion about China. By following similar textbook leads, your students can include in their reports information gathered from charts or tables.

Page 452 also contains inferences about the countries of Africa, based on information obtained from the "Table of Facts about Africa" on p. 444. In Algeria only 9 per cent of the land is in the sunny semitropical climate, yet 85 per cent of the people live there. The sunny semitropical section must be a more desirable section to live in than other parts of Algeria. The textbook helps your students to make similar inferences about other countries of the world.

Using the Index. Group assignments of the type suggested for this review give your students an opportunity to use the index. Each student should check the index in *The World Around Us* to find the page references for the country or countries which have been assigned to him. You can also suggest that students check other categories in the index such as transportation, agriculture, manufacturing, and mining for additional information about their particular country.

If your students will remember that bold face numbers indicate pages containing maps and that italicized numbers refer to pages containing pictures, their search will be much less time-consuming. The index entry for Canada, on p. 467, is a good illustration of different kinds of page references. One can tell at a glance that maps showing all or part of Canada appear on pp. 427, 245, 287, 291, 329, and 369. The remaining references are to pages containing text.

Additional material about Canada can be found by referring to the index entries under mining, lumbering, pulpwood, and transportation. The indexes of other geography books and reference books also can be used to find information.

Using the "Tables of Facts." The "Tables of Facts" for the various countries of the world on pp. 424-48, are good sources of information. These tables are arranged by continents, and the countries are listed in alphabetical order. The tables contain the name, area, population, and capital of every major country in the world. In addition, the tables list the various climatic regions found in each country as well as the percentage of the country's area that is occupied by each climatic region and the percentage of the population which lives in each region. The tables also list the most important products and the most important cities of each climatic region.

	FACTS ABOUT CLIMATIC REGIONS				
Country	Climatic Region	Per Cent of Population	Per Cent of Area	Important Products	Important Cities
SWEDEN Area: 173,391 sq. mi. Population: 7,150,606 Capital: Stockholm	Western Marine	39	19	Matches, glass, oats, rye, potatoes, manufactured goods	Göteborg, Malmo
	Moist Continental	36	15	Iron ore, iron and steel products, timber, wood products, oats, rye, barley, hay	Stockholm Västeras
	Northern Forestland	25	66	Timber and wood products, iron ore	Lulea, Kiruna

For example, by using the "Table of Facts" about Sweden, on p. 436, your students can collect the following information:

Sweden contains three different climatic regions: western marine, moist continental, and northern forestland. The northern forestland occupies two-thirds (66 per cent) of the country, but only about one-fourth of the people live there. This climatic region produces timber, wood products, and iron ore. Lulea and Kiruna are the chief cities.

The western marine region covers almost one-fifth of the country and nearly two-fifths of the population lives in this section. Agriculture and manufacturing are carried on, and the chief products include matches, glass, oats, rye, potatoes, and manufactured goods. The chief cities are Göteborg and Malmo.

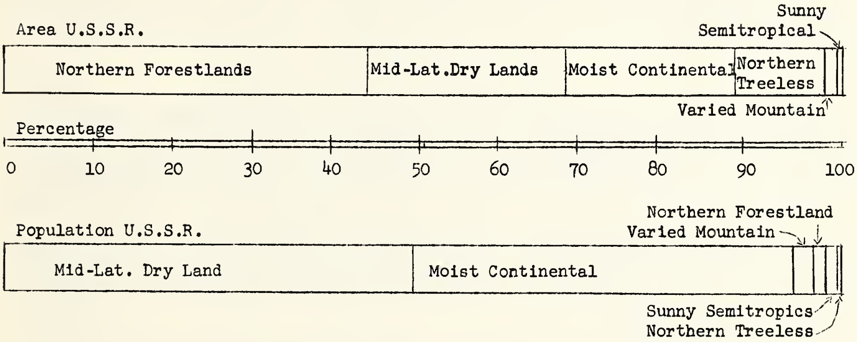
The moist continental region covers the smallest area of Sweden, but it contains over one-third of the people. This region appears to be the most productive part. Here, man finds it easier to make a living. The area contains minerals, and manufacturing and agriculture are carried on. The chief products are iron ore, iron and steel products, timber, wood products, oats, rye, barley, and hay. Stockholm, the capital, and Västeras are the leading cities in this section.

This type of information added to the material which each student can find by reading "Reviewing the World's Continents and Countries" and by re-reading pertinent parts of the textbook will give a good over-all picture of each assigned country.

Using Various Types of Graphs. The information contained in the "Tables of Facts" can also be used as data for graphs. You might encourage your students to construct graphs to clarify their booklets and their reports. Many of the relationships between climate and population are made clearer through the use of graphs.

All graphs dealing with percentage should total 100 per cent. The easiest graph of this type to construct is made by marking off the proper percentages on a horizontal bar graph, whose entire length represents 100 per cent. Students can use this graph as they would a ruler.

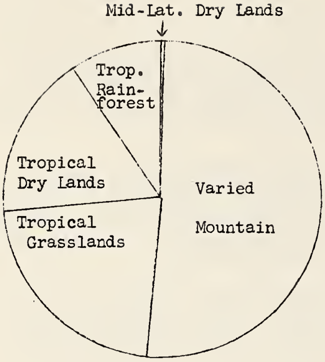
The following example is taken from the "Table of Facts"about the U.S.S.R., which appears on p. 436.



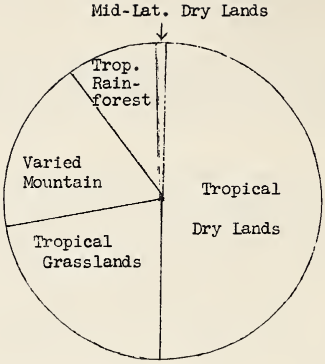
Your students can easily see the proportionate areas of the U.S.S.R. covered by the various climatic regions. They can also see at a glance that the middle latitude dry lands contain the most people, followed closely by the moist continental region.

Some of your students may wish to construct circle graphs, but for such graphs some knowledge of mathematics is required. The following example is based on the information about the climatic regions of Mexico on p. 425. You might pass on these instructions to your students: First, be sure the various percentages of population or area total 100. Then, by taking the various area percentages of 360°, calculate how many degrees of the circle each climatic region will cover. Round off the fractions and make sure the total number of degrees is 360. By using a protractor, mark off the degrees that represent the various percentages (of area or population) around the circumference of the circle. Connect these marks to the center of the circle. Label each part or use a color key to indicate the various portions. (See graphs on next page.)

Climatic Region	% Population	Degrees	% of Area	Degrees
Varied Mountain	51	183	18	65
Trop. Grassland	22	79	22	79
Trop. Dry Land	17	61	50	180
Trop. Rainforest	10	36	9	33
Mid-lat. Dry Land	small	1	1	3
	100	360	100	360



POPULATION OF MEXICO



AREA OF MEXICO

Climatic graphs similar to the ones shown on pp. 10-11 of Booklet 2 can be used to plot climate statistics of weather stations located within the different countries. However, simpler graphs can be constructed to compare climate statistics of any number of weather stations. Much of the material on p. 420 and the data included in the "Climate Facts" throughout the textbook may be utilized in this way.

The following example compares the climate facts for three cities in the United States: New York, N.Y., representing moist continental climate; Mobile, Ala., representing moist semitropical climate; and Los Angeles, Calif., representing sunny semitropical climate.

(graphs appear on next page)

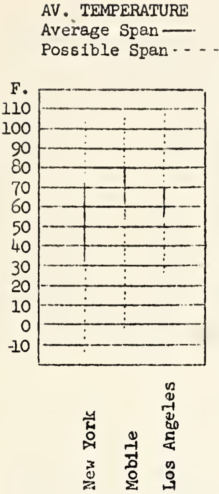
The solid line on the Average Temperature graph shows the average span of temperatures between January and July. Your students will be able to see that New York City has the greatest temperature span, that Mobile has the warmest average temperatures, and that Los Angeles has a very small temperature span. The dotted lines show the possible span between the highest and the lowest temperatures ever recorded.

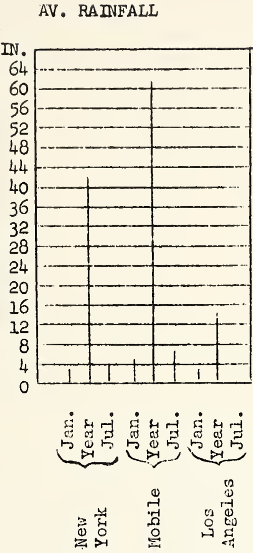
In the Average Rainfall graph, the January and July rainfall is plotted to indicate patterns in precipitation. Yearly averages are also shown. The graph shows that both New York and Mobile have just slightly more rain in July than in January. Los Angeles, however, illustrates the sunny semitropical characteristic of winter rain and summer drought.

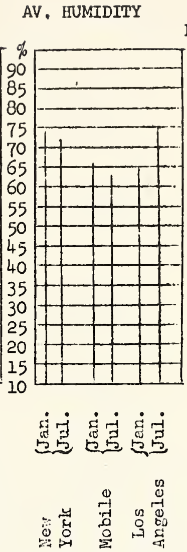
The Average Humidity graph indicates little difference between the three cities. Your students might be surprised to discover that New York is damper than Mobile. In both places, the humidity is just slightly higher in the winter than in the summer. In Los Angeles, the reverse is true.

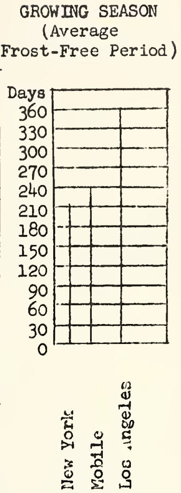
The best agricultural picture can be seen on the final graph which plots the Growing Season (Average Frost-Free Period). The Los Angeles area can grow crops throughout the year because of its 360-day frost-free period. New York farmers can produce crops in a frost-free period averaging 211 days; and farmers in Mobile have 240 frost-free days.

Comparison graphs can be used to compare the various statistics of all the countries on one continent. For example, the table on pp. 444-45 lists the population and area of each country in Africa. A bar graph can be constructed to show how the population figures (or the areas) of these countries compare. The example given on page 13 is based on population figures.

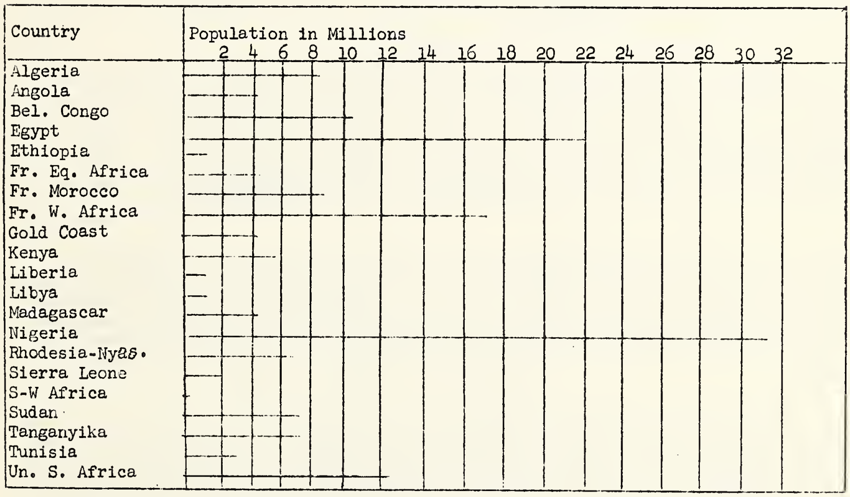








AFRICA



Using Mathematics to Clarify Geographic Concepts. Some of your **average and ***advanced students might like to use their mathematical skills in connection with the tables on pp. 424-48. The results of their computations can be shown in graph, chart, or table form. Your students can use the results in their reports and their booklets. Try to make sure that mathematics in the geography classroom is not used merely to provide practice in problem-solving but to help clarify important geographic concepts.

The tables on pp. 424-48 give information on the actual area in square miles and the actual population of every major country in the world. The per cent of population and area for each climatic region within a country are also included in the tables. With this information, your students can find the actual population or actual area of any climatic region within a country. Finally, your students can use the population and area figures to compute population density.

The table for Italy on p. 433 and the following computation can serve as an example for your students:

Country	FACTS ABOUT CLIMATIC REGIONS				
	Climatic Region	Per Cent of Population	Per Cent of Area	Important Products	Important Cities
ITALY Area: 116,224 sq. mi. Population: 48,256,608 Capital: Rome	Sunny Semitropical	64	68	Wheat, olives, grapes, vegetables, potatoes, textiles, citrus fruits	Rome, Naples, Genoa, Florence, Palermo
	Moist Continental	28	18	Metal manufactures, textiles, cereals, sugar beets	Milan, Turin
	Varied Mountain	8	14	Potatoes, dairy products	Como

The area of Italy is 116,224 square miles. The sunny semitropical climate occupies 68 per cent of the country's area. The actual area of the sunny semitropical section can be found by multiplying 116,224 square miles by 68 per cent. (Answer: 79,032.3 square miles of sunny semitropical climate in Italy.) The actual population of this section is found by taking 64 per cent of the total population, 48,256,608. (Answer: 30,884,229 people live in sunny semitropical Italy.) Population density is figured by dividing population by area. In the sunny semitropical section, the population density would be 30,884,229 people divided by 79,032 square miles, or 390 people per square mile. Information about the other climatic regions in Italy can be figured in a similar manner. The results will be as follows:

ITALY

Climate	Per Cent of Area	Actual Area (sq. mi.)	Per Cent of Pop.	Actual Population	Population Density
Sunny Semitropical	68	79,032.3	64	30,884,229	390
Moist Continental	18	20,920.3	28	13,511,850	646
Varied Mountain	14	16,271.4	8	3,860,529	237
		116,224.0		48,256,608	

As a result of this mathematical analysis, your students will be able to see that the moist continental region of Italy is the most densely populated of the three climatic regions. In other words, this area is the most popular region in which to live. Almost twice as many people live on one square mile of land in the moist continental section as on one square mile of land in the sunny semitropical region. Frequently, students fail to see such facts when they read percentage figures on tables.

Your students can also use mathematics in connection with the statistics for an entire continent. (Large numbers can be rounded off to make the task easier.) Each climatic region must be handled separately. For example, by referring to the table on pp. 428-29, your students can figure the data for the moist semitropical region of South America. The total area and population figures for South America can be obtained by adding the proper figures for each country. Next, your students will have to calculate the actual area and population of the moist semitropical area of each country. The results can then be totaled to give the picture for the entire continent. The results will probably look something like this:

(see tables on next page)

South America: Moist Semitropical Region -- Area

Country	Total Area (Sq. mi.)	Per Cent	Area of Moist Semitropical Region (Sq. mi.)
Argentina	1,076,000	25	269,000
Bolivia	424,000	0	
Brazil	3,268,000	7	229,000
Chile	286,000	0	
Colombia	439,000	0	
Ecuador	105,000	0	
Guianas	171,000	0	58,000
Paraguay	157,000	37	
Peru	482,000	0	
Uruguay	72,000	100	72,000
Venezuela	347,000	0	
	6,827,000		628,000

South America: Moist Semitropical Region -- Population

Country	Total Pop.	Per Cent	Pop. of Moist Semitropical Region
Argentina	17,900,000	68	12,200,000
Bolivia	3,000,000	0	
Brazil	52,600,000	18	9,500,000
Chile	6,000,000	0	
Colombia	11,800,000	0	
Ecuador	3,200,000	0	
Guianas	600,000	0	
Paraguay	1,400,000	90	1,300,000
Peru	8,400,000	0	
Uruguay	2,500,000	100	2,500,000
Venezuela	5,500,000	0	
	112,900,000		25,500,000

By dividing the area of the moist semitropics (628,000 sq. mi.)by the approximate area of South America (6,827,000 sq. mi.), your students will discover that about 9 per cent of South America has moist semitropical climate. In like manner, by dividing the population of the moist semitropics by the total population of South America, your students will find that approximately 23 per cent of the people live in this climatic region. Additional information about the whole continent of South America can be obtained by examining the statistics for each of the other climatic regions on the continent.

Using Maps. Members of your various committees will find that maps can be used effectively to illustrate many things in their booklets and oral reports. Maps may be bought commercially, mimeographed according to the instructions on p. 20 of Booklet 2, traced from the textbook or an atlas, or drawn free-hand. In this review, your students will probably find that maps which are traced or drawn free-hand are most useful. By tracing or drawing his map, each student is free to choose as a model the map which he feels will serve his needs best.

Your students can refer to the maps which accompany each chapter and feature as well as the map section at the back of the textbook. Your groups may want to use the world maps on pp. 414-23 or the more detailed continent maps on pp. 426-47. You can also encourage your students to use atlases, large wall maps, and any special maps which you think may help them.

Many different things can be shown on maps prepared for reports and booklets. First of all, your students may want to trace outline maps of their particular countries. If a student cannot find a map large enough for his purpose, he can put a small map in an opaque projector and enlarge the small map on a sheet of paper thumbtacked to the bulletin board. By tracing around the enlarged outline, he can produce a large map of his country.

Students can make a climatic map for their particular country by referring to the climatic map of the continent on which their country is located. The various climatic boundaries can be traced or drawn free-hand, and color can be used to make the regions clearly distinguishable. A key should be added to the map to show what each color represents.

A products map of the country can also be made from an outline map. The table of facts for each country, in the "Review and Reference Section," lists several products from the various climatic regions within the country. These products can be represented on the map in the area from which they come by small symbols standing for the products. Some students may want to make small drawings of the actual products, cut pictures of the products from magazines, or paste actual samples of the products on the map.

A political map of the country in question might be used to show the various political subdivisions, chief cities, capital, and many other man-made features. The political maps of the continents furnish much of this information. Some of the maps in the chapters and features contain more details.

The various physical characteristics of a country can be shown on a physical map. The maps in the chapters and features as well as the physical map of the world on pp. 418-19 show land elevation, mountain ranges, chief rivers, and other physical characteristics. These can be shown on outline maps through the use of symbols, such as shading, hatching, color, or drawings.

Some students may prefer to show the physical features of a country by making a physical model of the country. Modeling clay, papier-mâché, plaster of Paris, flour and salt mixed with water, or layers of cardboard can be used to model highlands, mountains, valleys, and plains. The model can also show transportation lines, cities, vegetation, and many other aspects of a country.

Other information that can be recorded on maps includes such items as population, rainfall, soil, religion, language, and growing season. Your students will probably think of several other items.

If all the members of a committee use the same scale in drawing their maps, a huge map of the entire continent can be put together on the bulletin board or on a flannel board. If the individual maps are drawn carefully, the countries will fit together like the pieces of a jigsaw puzzle.

When supervising activities involving illustrative materials, whether it be maps, graphs, pictures, or charts, you will need to make sure that your students understand the real purpose of such materials. Each visual or graphic item should clearly illustrate some important geographic aspect of a country; each item should add something to the knowledge of the subject at hand. Illustrative material should not be made just for the fun of making something.

You will probably have to remind your students that it is not the amount of illustrative material but its quality and appropriateness that are important.

Using Art Work. Some of the members of your committees may have artistic talents. These students will enjoy drawing things which can be used in their booklets and with their oral reports. In a project such as this, art can take many forms.

The cover of the booklet presents the first challenge. Art work for the cover involves choice of colors, design or picture, lettering, and binding. All students should be encouraged to make an original cover.

The content of the booklet presents many opportunities for using art work to illustrate or explain important concepts. If drawings, sketches, paintings, or cartoons are to be used in the booklet, they should be small enough to fit on the page without being folded. If they are to be used in connection with the oral report, they should be large enough so that everyone in the classroom can see. Pictures should be clearly marked or labeled for rapid identification. They should be displayed near the matter which they are intended to illustrate.

Students who do not draw well but who desire to include picture material with their booklets and oral reports can look for appropriate material in old magazines and newspapers. The selected pictures should be cut out neatly and then glued into the booklet or on mounting paper for display. Each picture, accompanied by a brief caption, should be displayed near the material which it illustrates.

Using Original Tables. While writing their reports, your students will be referring frequently to the tables in the "Review and Reference Sections" of The World Around Us. Some of your students may also want to include tables in their reports. Tables are more valuable if they are planned and constructed by the students themselves rather than copied directly from books.

Tables are especially useful for comparisons of various countries within a continent. The table below was compiled from the information on pp. 424-25 in the textbook. It compares various aspects of four countries of North America. Your groups may want to construct similar tables.

Comparison of Four Countries of North America

	United States	Canada	Mexico	Alaska
Area (sq. mi.)	3,022,387	3,577,163	758,061	571,065
Population	150,697,361	14,009,429	25,779,254	128,643
Pop. Density (per sq. mi.)	50	4	34	.22 or about 1 in 5 miles
Largest Climatic Regions	Mid-lat. Dry 34% Moist Continental 27% Moist Semitr. 22%	N. For. 52% N. Treeless 29% Moist continental 11%	Trop. Dry. 50% " Grass. 22% Mountain 18%	N. For. 57% N. Treeless 38% Marine 5%
Most populated regions	Moist Continental 60% Moist Semitr. 24% Sunny Semitr. 7% Mid-lat. Dry 4%	Moist Continental 79% N. For. 11% Marine 5%	Mountain 51% Trop. Grass. 22% Trop. Dry. 17% Trop. Rain. 10%	N. For. 70% Marine 22% N. Treeless 8%
Products	Mfg. Goods Minerals Agri. Products	Mfg. Goods Timber Agri. Products	Minerals Agri. Products	Minerals Timber Fish

Your students can get information for similar tables from geography books, reference books, atlases, yearbooks, almanacs, and newspapers. Tables should be made on large tagboard if they are to be viewed by the whole class, or on notebook-size sheets of paper if they are to be included in the booklet.

Using Other Resources. Your students may find it necessary to visit the library while preparing their booklets or their group report. Visits to the school library can be arranged during classroom periods. Visits to the public library are usually the student's responsibility and have to be arranged by the student personally.

The preparation of booklets and reports gives your students an opportunity to develop or practice valuable research skills. Many of these skills involve the use of library material. Students should learn how to use a number of reference books. In the library, they will be able to find encyclopedias, yearbooks, atlases, almanacs, magazines, newspapers, pamphlets, and books of non-fiction and fiction in which their countries are discussed.

Students should be encouraged to skim the material first to see whether it will be applicable to their report. When a student has found some material which is useful, he should read it carefully and then write a digest of the information in his own words. There is little value in information copied directly from books. Encourage your students to cite the sources of information. It is not essential that they learn proper bibliographical form at this time. Stating the title of the source, the author, and the page number is sufficient acknowledgement.

If you can have some of the reference books, almanacs, and nonfiction books in the classroom, you can help your students learn how to use these valuable research tools. You may also want to show your students how to use magazines, newspapers, pamphlets, and other current material in compiling committee reports. Frequently, radio and television programs and the movies present material that is pertinent to a particular country. Your students should realize the value of these current programs and try to evaluate them in the light of the geographic information which they have learned. They will be better equipped to understand world happenings and to realize their relative importance.

Still another source of information, which should not be overlooked, is the resource person. Perhaps in your community there are people who are familiar with other countries of the world. Members of your committees might interview these people to gain further information about specific countries.

Since valuable information also can be gathered from good photographs or films about a country, picture observation skills should be used to the fullest. You might want to have your students see some of the films or filmstrips described in the list of "Selected Audio-Visual Aids" for each chapter and feature. Most libraries also keep vertical files of pictures about different countries. Some books contain a pictorial coverage of different areas of the world. Use should also be made of the pictures in newspapers, magazines, journals, and travel folders.

Your class will come to realize that there is a wide variety of sources from which they can gather information for their review. They should try to use as many of these sources as possible.

EVALUATING GROUP WORK

Much of your evaluation of the committee's work and of the individual members will come when you grade the booklets and listen to the oral reports. But some of your evaluation can take place while the booklets and reports are being compiled. You will have opportunities to observe the members of the different groups at work. Evaluation of many skills can be made as you help or guide individual members of the committee. The finished product will enable you to evaluate the results of some of these skills.

Many teachers find it useful to have their students do some self-evaluation. In order to guide this self-evaluation, some teachers use a check sheet which carefully lists the various items to be evaluated. On this sheet, the student marks the boxes which correspond to the way he feels about the various types of items being rated. It is important that the student understand that the columns on the check sheet will not be used to determine his numerical grade. You are mainly interested in getting the student's opinion about his own work, his committee's work, and the work of the other committees.

The check sheet on the next page lists several things that you may want your students to evaluate. You can add other items to the sheet which you construct for your class.

Notes for Your Own Evaluation Sheet

Personal Evaluation Sheet

WORK IN COMMITTEE					
1. Co-operation (members)	At all times	Most of the time	Sometimes	Seldom	Never
2. Co-operation (chairman)	At all times	Most of the time	Sometimes	Seldom	Never
3. Individual Assignment	Did all of it	Did most of it	Did some of it	Did little of it	Did none of it
4. Contribution (to group report)	Did almost everything	Did more than my share	Did my share	Did less than my share	Did nothing
5. Individual work	Worked quietly and well at all times	Worked quietly and well most of the time	Worked well some of the time	Worked little of the time	Wasted much time
REFERENCES & RESOURCES					
1. Use of *The World Around Us*	Review of countries, charts, maps, index, chapter material, glossary	Review of countries, charts, maps, index chapter material	Review of countries, charts, index, chapter material	Review of countries, index, chapter material	Review of countries
2. Other Texts	Used 4	Used 3	Used 2	Used 1	Used 0
3. Nonfiction bks.	Used 4	Used 3	Used 2	Used 1	Used 0
4. Fiction books	Used 4	Used 3	Used 2	Used 1	Used 0
5. Almanacs & atlases	Used 4	Used 3	Used 2	Used 1	Used 0
6. Encyclopedias	Used 4	Used 3	Used 2	Used 1	Used 0
7. Magazines	Used 4	Used 3	Used 2	Used 1	Used 0
8. Newspapers	Used 4	Used 3	Used 2	Used 1	Used 0
9. Radio, Movie, or television shows about country	Used 4	Used 3	Used 2	Used 1	Used 0
10. School Library (trips)	Made 4	Made 3	Made 2	Made 1	Made 0
11. Use of school library	Needed no help in finding material	Needed little help in finding material	Needed some help	Needed a great deal of help	Couldn't find anything
12. Trips to public library	Made 4	Made 3	Made 2	Made 1	Made 0
13. Use of public library	Needed no help in finding material	Needed little help in finding material	Needed some help	Needed a great deal of help	Couldn't find anything
CRITICISM					
1. Committee Work	Excellent way to work	Good way to work	Fair way to work	Poor way to work	Waste of time
2. Committee work	Liked it very much	Liked it	All right	Didn't like it	Waste of time
3. Chairman	Helpful, democratic, good organizer	Helpful, democratic	Democratic, good organizer	Helpful, good organizer	Poor organizer, dictator
4. Teacher's help	Suggestions, new ideas, resource help	Suggestions, resource help	Resource help	Too much help	Too little help

(Chart continued on next page)

5. Classroom materials	Art supplies, reference books, atlases, almanacs, magazines, textbooks, globes, nonfiction books, pictures	Art supplies, atlases, textbooks, globes, maps	Art supplies, textbooks, reference books	Other textbooks	No additional material
6. Other Committee Reports	Helped recall much material. Learned many new things.	Helped recall much material. Learned some new things.	Helped recall material. Learned few new things.	Helped recall some of the material.	Little help in review.

Remarks

Signed: . . . .

Check Proper Box Below

Chairman ☐ Member ☐

PRESENTING REVIEW MATERIAL

The success or failure of committee work hinges on the presentation of the material. This is the most important part of any group work project. The groups must be taught how to share their learning with the rest of the class.

As committees work on their booklets and on the reports to be presented to the rest of the class, you will have an opportunity to guide or direct much of the activity. You may want to check each committee's final report to make sure that the important aspects of the countries and continent have been mentioned and that the committee is prepared to give its report. You may want to make some suggestions for improvement or note items which can be omitted.

Most students in your class will have prepared a booklet about a country or a group of countries. The completed booklets should be displayed so that students will have an opportunity to examine each other's work. One committee can be assigned to grade the booklets of another committee, using the evaluation check sheet which was discussed on p. 7 of this booklet. The various committees may want to arrange bulletin boards or special displays to stimulate interest in their report.

Oral Reports. Oral reports are the chief means of sharing the findings of the committees with the rest of the class. Your students have already had some experience in giving oral reports. You may want them to review the standards for making oral reports which were discussed on p. 6 of Booklet #10.

Some of your committees will probably give their reports in a fairly conventional manner. First, the chairman will preview the continent. He will then introduce the various members of his committee who will tell the class about their countries. Finally, the chairman will summarize the important information which has been presented.

The chairman and the members who are reporting should make sure that the reports contain all of the information which was requested on the assignment sheet. If they want to use pictures, graphs, charts, maps, and drawings to illustrate the reports, these visual aids should be large enough to be clearly visible to the entire class. Encourage students who are reporting to explain their charts, graphs, and maps to the class audience.

Dramatizations. Some of the committees may wish to put more efforts into their report and present it in the form of a dramatization. There are no mechanical rules of procedure for a classroom play. For the purpose of the review, elaborate costumes or scenery are unnecessary. The script can be prepared by the committee. Your direction may be necessary to make sure that the important subject matter is not forgotten.

The committee members will have to spend some of their time rehearsing the play. Memorization of parts is not necessary since the main purpose of the dramatization is communication of facts rather than impressive acting. The dramatization might be built around a central idea similar to one of these:

1. A family planning its vacation
2. Explorers planning an expedition
3. Soldiers discussing their travels
4. Reconnaissance by a group from outer space
5. Gathering of the United Nations

Other forms of presentation that can be classed as dramatizations are the mock radio program or telecast. Few props are needed for reports of this kind. A microphone, either real or artificial, a sign saying "Quiet Please -- On the Air," and a big box representing a television camera are the only essential pieces of equipment.

The students who are to participate write their own scripts, giving the important factual information about the continent and countries. The report is then presented in the manner of a news program or a round-table discussion. Some teachers record such programs on tape and use the recorded reports with several classes. By exchanging the reports of different classes, teachers can usually keep students actively interested.

The mock broadcast offers ideal opportunities for showing student-made slides, which were discussed on p. 16 of Booklet # 8. As the reports are being presented, slides of graphs, drawings, maps, and charts can be projected on a screen, simulating actual television. Your students will no doubt have many other ideas which can be used to make the oral reports interesting and meaningful.

In all of the reports, each committee member should be encouraged to feel that he is making a valuable contribution not only to his own group but to the entire class. For this reason, it is advisable to have every committee composed of *reluctant, **average, and ***advanced students. With proper guidance, each student can contribute something to the class review.

Check Up and Discussion

Following each committee report, whether it be a formal oral report, dramatization, or a mock broadcast, the class should be allowed to hold an open discussion. At this time, students can question anything in the reports which they did not understand. Valuable additional information can also be presented, and misunderstandings and misconceptions can be cleared up.

The assignment which was given to each committee suggested that every member prepare a few check up questions about his country. These questions can now be used to check up on the class's understanding of the oral reports. The group chairmen will want to ask the class some of these questions. Try to make sure that everyone has an opportunity to answer.

Other committees may want to present their check up questions in a slightly different fashion. Some of them may want to plan class contests using the information contained in their reports. In the simplest form of contest, the class is divided into two teams. The committee chairman then takes turns asking each side a question. The team with the greatest number of correct answers wins.

One of the most popular class contests is classroom baseball. Questions are graded according to difficulty. The easiest questions represent one-base hits; more difficult questions are doubles; still more complicated questions are triples; and the most difficult questions are home runs.

A baseball diamond is drawn on the board, and one student is chosen as scorekeeper and base runner. The class is divided into two teams. The committee chairman, who is asking the questions, faces one team at a time and gets ready to ask a question. The student chosen to answer selects a single, double, triple, or home-run question, whichever he wishes to attempt. If a correct answer is given within a reasonable time limit, the scorekeeper places a runner (chalk mark) beside the base indicated by the type of question which was chosen. Runners must be forced around the bases. For example, if runner A is at second base when a two-base question is answered correctly, runner A goes only to third base because he was not forced to go farther. If runner A is at second base when a one-base question is answered correctly, runner A is not allowed to advance at all.

The team that forces the most runs across home plate during the time allotted for the contest wins the game. Each team stays "at bat" until it has accumulated three outs (three incorrect answers.) The opposing team then takes its turn, answering questions until it; too, is retired by three outs. The individual members of the teams take turns answering questions just as baseball players do in the batting order.

A quiz show is another method of checking up on oral reports. All questions that are to be asked are written on slips of paper which are folded so that the questions cannot be seen. The committee chairman places the folded slips in a box.

Each class contestant comes forward and reaches into the box to select his question.

The chairman asks the contestant the question. If he answers correctly, the contestant wins a prize. Everyone in the class can take a turn at being a contestant.

REVIEWING WORLD CITIES AND TRADE (pp. 456-60)

A good way to finish the review session is to have your class read the section titled "Reviewing World Cities and Trade" on pp. 456-60. This section explains why cities have grown in certain localities and not in others, what cities do, and how cities carry on trade.

You will want to draw your students' attention to the map on pp. 458-59, which shows the world's principal cities, industrial centers, and trade routes. On p. 460, your students will find a useful chart listing the great cities of the world with their latest population figures.

Having completed your review and done any re-teaching that was necessary, you have guided your class in taking two looks at the world. The first was a careful look at the various climatic regions of the world, the people who live in them, and the significant relationships between people and environment. The second served to summarize and review, continent by continent and country by country, many of the basic geographic concepts learned during the year.

The World Around Us has attempted to accomplish six "Primary Objectives." In striving toward these objectives, you have taught your students important facts, skills, attitudes, and appreciations that will help them to become part of a more intelligent and enlightened citizenry.

ANSWER KEY FOR TEACHING TESTS

INTRODUCTION TEST

A. Matching Test (page 3)

1. b 2. c 3. b 4. a 5. b 6. a

B. Matching Test

7. b 8. a 9. c 10. a 11. c 12. b 13. c
14. b 15. c 16. a

C. Matching Test

17. d 18. b,c,d 19. c,d 20. a 21. a 22. b
23. a,b,c 24. d 25. b 26. b,c 27. b

D. Matching Test (page 4)

28. d 29. b 30. e 31. a 32. f 33. c

E. Identification Test

34. food 35. clothing 36. shelter

F. Completion Test

37. precipitation 38. humidity 39. temperature
40. frost-free period (or growing season)

G. Best-Answer Test

41. a 42. a 43. b

H. Completion Test

44. earthquake 45. flood 46. hurricanes
47. tornadoes 48. drought 49. erosion

UNIT TEST ONE

CHAPTER 1 (page 5)

A. Best-Answer Test

1. b 2. b 3. d 4. a 5. c

B. Matching Test

6. c 7. d 8. g 9. e 10. b 11. f

CHAPTER 2

C. Best-Answer Test

12. b 13. a 14. c 15. a 16. a

CHAPTER 3 (page 6)

D. Best-Answer Test

17. c 18. c 19. d 20. a

E. Matching Test

21. c 22. d 23. b 24. e 25. f 26. a

UNIT SUMMARY

F. Matching Test

27. b 28. d 29. e 30. c 31. a

G. Identification Test

32. X 33. X 34. - 35. - 36. X 37. X

38. - 39. X

UNIT TEST TWO

INTRODUCTION (page 7)

A. Completion Test

1. dry 2. rainy 3. has never

CHAPTER 4

B. Best-Answer Test

4. c 5. a 6. b

C. Matching Test

7. b 8. b (or d) 9. d 10. c 11. a 12. e

D. Matching Test

13. d   14. a   15. c   16. b

E. Matching Test (page 8)

17. d   18. b   19. a   20. c

CHAPTER 5

F. Best-Answer Test

21. b   22. b   23. c   24. d

G. Matching Test

25. b   26. c   27. a   28. d

UNIT SUMMARY

H. Identification Test

29. S.A.   30. S.A.   31. I.   32. I.   33. A.

34. A.   35. I.   36. S.A.   37. I.   38. Aus.

UNIT TEST THREE

INTRODUCTION (page 9)

A. True-False Test

1. F   2. T   3. T   4. F

CHAPTER 6

B. Matching Test

5. f   6. b   7. a   8. g   9. d   10. e   11. c

C. Identification Test

12. O   13. D   14. D   15. D   16. O   17. O

18. O   19. O   20. O   21. D

D. Matching Test (page 10)

22. d   23. b   24. a   25. c

CHAPTER 7

E. Best-Answer Test

26. c   27. b   28. b   29. a   30. c   31. b

UNIT SUMMARY

F. Matching Test

32. e   33. c   34. b   35. a   36. b   37. d   38. b

UNIT TEST FOUR

INTRODUCTION (page 11)

A. Completion Test

1. summer   2. winter   3. winter   4. 10 months

5. has   6. over

CHAPTER 8

B. Matching Test

7. c   8. a   9. e   10. b   11. d

C. Best-Answer Test

12. c   13. a   14. c   15. b   16. b

D. Matching Test

17. b   18. d   19. c   20. a

CHAPTER 9 (page 12)

E. Identification Test

21. -   22. -   23. c   24. -   25. c

26. c   27. -   28. c   29. c

F. Matching Test

30. a   31. c (or f)   32. e   33. a   34. a
35. d   36. b (or f)

UNIT SUMMARY

G. Matching Test

37. d   38. a   39. b   40. c

H. Matching Test

41. e   42. b   43. d   44. c   45. a

UNIT TEST FIVE

INTRODUCTION (page 13)

A. Identification Test

1. B   2. SS   3. MS   4. SS   5. MS   6. B

CHAPTER 10

B. Matching Test

7. c   8. d   9. b   10. a

C. Identification Test

11. -   12. C   13. C   14. -   15. C
16. C   17. -   18. C   19. C

D. Matching Test

20. c   21. b,d   22. a

CHAPTER 11 (page 14)

E. Matching Test

23. b   24. a   25. d   26. c

F. Identification Test

27. U   28. F   29. F   30. F   31. U

UNIT SUMMARY

G. Matching Test

32. c 33. b 34. e 35. a 36. d

H. Matching Test

37. d 38. b 39. e 40. a 41. g 42. f 43. c

UNIT TEST SIX

INTRODUCTION (page 15)

A. Completion Test

1-4. farming, fishing, sheep herding, shipping, mining, trading, railroading

B. Best-Answer Test

5. c 6. b 7. b 8. a

CHAPTER 12

C. Matching Test

9. c 10. a 11. d 12. b

D. Identification Test

13. C 14. G 15. G 16. C 17. G 18. C

E. Identification Test

19. C 20. C 21. - 22. - 23. C

F. Matching Test (page 16)

24. a 25. c 26. b

CHAPTER 13

G. Matching Test

27. d 28. c 29. a 30. e 31. b 32. h 33. f
34. i 35. g

UNIT SUMMARY

H. Completion Test

36. western 37. sea 38. North Atlantic Drift
39. trees (or forests)

UNIT TEST SEVEN

CHAPTER 14 (page 17)

A. Identification Test

1. -   2. X   3. X   4. -   5. -

B. Matching Test

6. c   7. a   8. X   9. X   10. b   11. X

C. Completion Test

12. flat   13. hot, humid   14. fertile (or rich)

15. long (or 130-180 days)   16. plentiful (or 25-40 inches)

D. Best-Answer Test

17. d   18. d   19. c

E. Matching Test

20. c   21. d   22. a   23. b

CHAPTER 15 (page 18)

F. Matching Test

24. c   25. f   26. b   27. d   28. e   29. a

G. Best-Answer Test

30. a   31. c   32. b   33. a

UNIT SUMMARY

H. Matching Test

34. b   35. b   36. c   37. a   38. d

39. b   40. e

I. Completion Test

41. fertile (or rich, good)   42. level (or flat)

43. natural (or mineral)   44. plentiful

UNIT TEST EIGHT

INTRODUCTION (page 19)

A. Identification Test

1. T 2. M 3. M 4. M 5. T 6. M 7. T 8. T

B. True-False Test

9. T 10. F 11. F 12. F

CHAPTER 16

C. Best-Answer Test

13. a 14. c

D. Identification Test

15. S 16. W 17. S 18. S 19. W

E. Matching Test (page 20)

20. d 21. b 22. a 23. c 24. a

25. d 26. c 27. b

CHAPTER 17

F. Matching Test

28. d 29. a 30. e 31. c 32. b

G. Matching Test

33. e 34. d 35. b 36. a 37. c

UNIT TEST NINE

INTRODUCTION (page 21)

A. Best-Answer Test

1. b 2. a 3. c

CHAPTER 18

B. Matching Test

4. e 5. h 6. g 7. a 8. d 9. c 10. f 11. b

C. Best-Answer Test

12. d 13. b 14. c 15. c

D. Matching Test (page 22)

16. c 17. b 18. e 19. a 20. d

E. Matching Test

21. a 22. c 23. b 24. b 25. a 26. b 27. a 28. c

CHAPTER 19

F. Identification Test

29. E 30. L 31. L 32. E 33. E 34. E 35. L

36. E 37. L 38. L 39. E

REVIEW TESTS

UNITED STATES (page 23)

A. Best-Answer Test

1. a 2. c

B. Matching Test

3. e 4. b 5. a 6. f 7. g

C. Matching Test

8. e 9. a 10. d 11. c 12. b 13. a

D. Identification Test

14. I 15. E 16. E 17. I 18. I

E. Identification Test

19. - 20. X 21. - 22. X 23. X 24. X

REST OF NORTH AMERICA (page 24)

A. Completion Test

1. X 2. X 3. - 4. - 5. X 6. -

B. Completion Test

7. Mississippi 8. Great 9. Mexico 10. Greenland

C. Best-Answer Test

11. b 12. c 13. b 14. d

SOUTH AMERICA (page 24)

A. Completion Test

1. Brazil 2. Argentina 3. Uruguay 4. Brazil

B. Completion Test

5. Argentina 6. Uruguay 7. Peru 8. Brazil

C. Identification Test

9. X 10. X 11. - 12. X 13. X 14. - 15. X
16. X 17. X 18. - 19. X 20. X

EUROPE (page 25)

A. Identification Test

1. E 2. E 3. N 4. N 5. E 6. E 7. N 8. E

B. Matching Test

9. d 10. e 11. f 12. a 13. b 14. g 15. h

ASIA (page 25)

A. Identification Test

1. 4, Japan 2. 10, India 3. 15, China
4. 13, India 5. 3, China 6. 12, Indonesia

B. Completion Test

7. tropical grasslands 8. moist semitropical

AFRICA (page 26)

A. Identification Test

1. X 2. - 3. X 4. - 5. - 6. X

B. Completion Test

7. diamonds (or gold) 8. palm oil 9. uranium and copper

C. Matching Test

10. h 11. c 12. b 13. g 14. a 15. f 16. d 17. e

AUSTRALIA AND OCEANIA (page 26)

A. Completion Test

1. tropical dry lands 2. moist semitropical
3. moist semitropical 4. western marine

B. Completion Test

5. Philippine 6. Hawaiian

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